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TRANSACTIONS

OF THE

MEDICAL SOCIETY

OF

LONDON.

VOL. I.

PART I.

London:

Printed by James Compton, Middle Street, Cloth Fair, West Smithfield.

SOLD AT THE SOCIETY'S HOUSE, BOLT COURT, FLEET STREET;

AND BY A. MAXWELL, 21, BELL YARD, TEMPLE BAR; AND GALE AND CURTIS, PATERNOSTER ROW.

1810.

BOSTON MEDICAL
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PREFACE.

IT has been a subject of just complaint, both with writers and readers, that the Memoirs of the Medical Society have been published at such distant and uncertain periods, that the interest of many of the communications has been diminished, and the value of some perhaps, from being of a temporary nature, wholly lost, before they have met the public eye. Hence the authors have frequently been induced to give them to the public through another channel, or, as has been the case in many instances, to with-

draw them altogether from publication; a circumstance to be regretted as a loss to medical science. That this has operated as a discouragement to the transmission of papers to the Society, cannot be doubted. The Council, anxious to remove the cause of complaint, have resolved to publish, at shorter and more regular intervals than hitherto, a selection from the papers that may be laid before them, regarding less the bulk of the volume than the earliness of its appearance, upon which the value often materially depends: this, they trust, will prove not less agreeable to the writers, than beneficial to the public. It is satisfactory to add, that since this resolution was first announced, the number of communications has so

far increased, as to encourage a reasonable hope that, by a continuance of the same zeal on the part of the Members of the Society and their Correspondents, the object in view will be realized, so that, for the future, a volume may not improbably be published in each year.

This alteration in the mode and time of publishing has induced the Council to change the Title of the Work, not as implying any essential deviation from the former plan, but rather with the view of shewing that there is no necessary connexion between the present and former volumes of Memoirs, of which this may be considered as, in fact, the commencement of a new series.

Of the comparative merits of the present collection, either in relation to the former volumes of the Society, or others of a similar description, it is both unnecessary, and would be improper, to say much: this is a point which the Public must ultimately decide upon. Discoveries of great importance in Medical Science are not of every-day occurrence, nor are they perhaps to be expected. The present collection lays no claim to such. Yet it is presumed that it will not be found destitute of interest, nor deficient in useful practical information. If this be the case, the object of the Society will be accomplished.

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OCTOBER 1810;

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TRANSACTIONS

OF THE

Medical Society of London.

Art. I.

ON MEDICAL TECHNOLOGY.

By JOHN MASON GOOD, F.R.S. Sec. M.S.

THE perfection of a science depends, in no inconsiderable degree, upon the perfection of its language; and the perfection of its language upon its simplicity and precision. A writer may have clear ideas in himself, but, to communicate them to his reader, his terms must be equally clear, and possess a definite meaning. The philosophy of the middle ages was a chaos of darkness and perplexity; and such it would perhaps have descended to the present day, had not Lord Bacon, the grand luminary of the sixteenth century, given life and utility to the senseless mass, by calling men from the jargon of words to the study of

things; and had not Locke and Condillac, in the ensuing century, set the admirable example of prefixing a determinate meaning to various equivocal words in common use, and scrupulously employing them in this single signification. Vocabula et nomina, says a writer to whom medicine is deeply indebted, sunt signa idearum nostrarum, et tantum valent, quantum sonant, vel quantum, ex definitione constanti, certus est et fixus eorum significatus. Si itaque ob inconstantiam loquendi eodem nomine plures ideæ enuncientur, eo prolato, auditor quidquid significet hoc nomen non intelligit; ideoque qui verbis æquivocis utitur, is ideo loqui videtur ut intelligi non possit. Eodem itaque nomine, unica tantum idea significari debet, si cordate loquamur*.

In our own times, every one feels the advantage which chemistry has derived from the universal adoption of the Lavoisierian nomenclature: and though natural history has not hitherto been benefited in an equal degree, it is only because its language has not been

* Sauvages Nosol. Methodic. Prolegom. p. 26.

equally corrected, and that its terminology still continues to a considerable extent imprecise and erroneous.

What has been done for chemistry and natural history ought long ago to have been done for medicine; the vocabulary of which is a jumble of terms derived from almost every language, and every system, whether dead or living, founded upon no common principle, and equally destitute of precision and simplicity. We have Hebrew and Arabic terms; Greek and Latin; French, Italian, Spanish, German, English, and even Indian, African, and Mexican; often barbarously and illegitimately compounded, fanciful in their origin, cacophonous in pronunciation, and, for want of a determinate signification, formed, as one would think, rather for the purpose of supplying the place of ideas than of communicating them. It is not necessary to detail the cause of this confusion: every one knows that it has for the most part arisen from those political and geographical changes that have marked the history of medicine in its different epochs, in conjunction with that succession of theories

which, from the time of Hippocrates, has been perpetually unfolding to the world; almost every one of which, if characterised by nothing else, has at least taken care to mark its existence by a new coinage of words.

The sources, then, of the impurity and perplexity of medical language may be contemplated under the following heads. First, the intermixture of different tongues that have no family or dialectic union. Secondly, the want of a common principle in the origin or appropriation of terms. Thirdly, the introduction of a variety of useless synonyms, or the adoption of different words by different writers to express the same idea. Fourthly, imprecision in the use of the same terms. Fifthly, an unnecessary coinage of new terms upon a coinage of new systems.

The following pages will be found to contain some remarks upon each of these sources; and will close with a few hints for such a general correction and improvement of medical language as may yet be introduced into it without violence or ostentation.

I. Every one knows that the languages

chiefly made use of in the nomenclature of our most celebrated nosologists are the Greek and Latin; and it would have been well if these tongues had formed the limit of their vocabularies, for unquestionably they contain a mint sufficiently large for every purpose. Even here, however, we occasionally meet with words illegitimately compounded, as *mentagra*, *pudendagra*, *nostalgia**, *tonsillitis*. But who is there that can endure, in the midst of a Greek and Latin vocabulary, the introduction of such barbarous words as *crampus*†, *soda*‡, and *scorbutus*§, from the German; *petechia* and *scarlatina* from the Italian; *modorra*, *modor-*

* I allude to the concurrent derivation of most of the dictionaries, which successively trace *nostalgia*, from *nostras (our own country)*, and αλγος *grief:* though I have no doubt that Sauvages is correct in referring it, as a legitimate term, to νοστος, "*to return*," and αλγος or αλγια as above. *Nostras*, indeed, should form *nostralgia*, and not *nostalgia*.

† *Der krampf:* whence our English *cramp*.

‡ *Das sod* or *sodt*: still used colloquially for both heartburn and water-brash: *ich bin mit dem sod geplagt*. "I am troubled with the water-brash." The same term in chemistry is derived from the same source.

§ *Der scorbut. der scharbock*, perhaps more properly *die schorf-pocke*. The direct origin is not exactly known.

rilla, and *patursa* from the Spanish; *bicho* and *bichios* from the Portuguese; *nucha**, *tofus*†, *essera*‡, *subeth*§ or *subeta*, and a variety of

* Probably نوک "the point or head of a thing;" the region of the atlas or uppermost of the cervical vertebræ. Dr. Turton states it to be derived from an Arabic term which he writes in Hebrew characters נקרה, and which he translates *cavity*, as though "the cavity between the shoulders." But I know of no such word in Arabic.

† In Arabic تغب "a mark," "weal," or "prominence on the body."

‡ I do not profess to understand very exactly what disease Sauvages intends by this term: but it is generally supposed to be a species of *urticaria*. The Arabic اسارا, from its radical meaning, should rather induce us to suppose it a species of erysipelas or *zona ignea*. اسير signifies *to subdue*, and the substantive in its plural اساري imports *captives*, or slaves bound round with chains: whence اسارا انار would be literally *zona ignea*. Hence the expression, سلسلهٔ اسار و قيد حصار ايله كر فتار اولدبلر. If the root be اسر, the difference will not be essential: this meaning "to bind, or bridle."

§ This is the term of Avicenna (سبات), and has the precise sense of *coma* in Greek: to which Avicenna sometimes adds اسرم, to express stertorous sleep.

others from the Arabians; *beriberi** from India; *mordexia* from China; *galiancon, frambœsia, nambakassa,* from

" Guinea, Guiana, or—the Lord knows where?"

These, however, form but a small sample of the gibberish that at present constitutes the medical vocabulary: they are purposely confined to the branch of nosology; and, amongst the writers upon this subject, to those who still possess, and very deservedly so, a high degree of celebrity; for I have not chosen to wander beyond the writings of Sauvages, Linnéus, Vogel, Sagar, Cullen, and Darwin.

Had these terms, indeed, been altogether arbitrary, and had an arbitrary origin been the principle of our nomenclature, there would

* Beriberi is unquestionably an Indian term, duplicated, or in the superlative degree, to denote a *violent* attack of whatever the radical term is intended to express, of which we do not seem to be altogether certain; for while Sauvages and others regard it as a species of *contractura,* Lord Valentia assures us that at Columbo " it is a dropsy peculiar to the island of Ceylon that frequently destroys in a few days." Voyages and Travels, Vol. I. p. 318. From the term being common to the Ceylonese as well as to the Hindus, it is probably of Sanscrit origin.

perhaps have been no great objection to the generality of them. Many of them are sufficiently euphonous, and each could, in such case, have excited only a single idea: but as this is not the fact, the classical student can never commit them to memory without disgust at so barbarous an association, nor the unclassical student without having a secret and commendable thirst to become acquainted with their radical meaning; which he can only thoroughly accomplish by sacrificing his time to a knowledge of the different languages from which they are severally deduced.

II. Yet there is a more serious evil in the want of a common principle to which medical technology can appeal, than in the want of a common language. And it is curious, and in some degree amusing, to trace the multiplicity of accidents or fancies (for it is seldom that they are referable to a graver source) to which we stand indebted for the greater number of our terms in common use.

Sometimes the nomenclator appears to have been smitten with the love of *colour*; and, in consequence, we have black, white, green, red,

scarlet, yellow, and purple diseases; under the names of *melæna, melas, atrabilis; leuce, alphos, albugo, albaras; chlorosis; rosa, rubedo, rubeola; scarlatina; icteritia, aurigo;* and *purpura* or *porphyra.*

Occasionally the order of *time* seems to have been the principle of designation; and, hence we have ephemeral and quotidian; continent and intermittent; tertian and quartan; or, in the more approved terms of our nosologists, amphemerine, tritœophyte, and tetrartophyte fevers: we have monthly fluxes, spring-rashes, and summer-heats. The nosological arrangements of Aretæus and of Cælius Aurelianus are founded upon this principle; and hence the distinction of diseases into *chronic* and *acute.*

In various cases *natural history* appears to have supplied the principle; and the nomenclator has wandered equally among birds, beasts, and fishes, for peculiarities and distinctive habits. From this quarter we derive the elegant terms of *fames canina, rabies canina* (dog-hunger, dog-madness); *cynanche* *

* Cynanche (κυναγχη) appears to have been at first a mere mistake for synanche (συναγχη), from similarity of sound. The

(dog-choak); *boulimia* or *bullimia* (ox-maw); *pica* (magpie-longing); *hippus* and *hippopyon* (horse-twinkle and horse-blotch); *elephantiasis* (elephant-skin); *scrophula* (swine-evil); *vitiligo** (calf-skin); *ichthyosis* (fish-skin); *tan-*

elegant mind of Celsus attempted to banish the former term, and to restore the true reading: whence, in his chapter *de Angina*, he observes, "nostri anginam vocant: apud Græcos nomen, prout species est. Interdum enim neque rubor neque tumor ullus apparet: sed corpus aridum est, vix spiritus trahitur, membra solvuntur; id συναγχην vocant. Interdum lingua faucesque cum rubore intumescunt, vox nihil significat, oculi vertuntur, facies pallet, singultusque est: ὡς συναγχη vocatur. Illis communia sunt; æger non cibum devorare, non potionem potest; spiritus ejus intercluditur. Lævius est, ubi tumor tantummodo et rubor est, cætera non sequuntur: id παρασυναγχην appellant." Still, however, the popular blunder continued: so that Galen was obliged to regard synanche and cynanche as synonyms, or nearly so; throwing out a hint that one of the two species of which he treats (for he omits the parasynanche of Celsus) might be called by the one name, and the other by the other. Sive synanchen dicere volueris sive cynanchen vel alterum quidem horum synanchen, alterum vero cynanchen, sive utrunque synanchen vocaveris, duas synanches sciveris esse rationes. Tom. VI. 324. Aetius afterwards attempted to justify *cynanche*, from the patient's thrusting out his tongue like a dog: but Cælius Aurelianus and Paulus used *synanche* after Celsus.

* I have translated this term as above upon the authority of the grammarians and medical lexicographers, who generally

tarismus (tarantula-bite); *vampirismus* (vampire or bat-bewitchment), a term best understood by our own vulgar synonym *blue-devils:* and *urticaria* or nettle-rash*.

Sometimes the names of *persons* or of *places* have been resorted to as a foundation for entitling diseases: and from this source we derive *facies Hippocratica; lepra Arabum*, and *lepra Græcorum; plica Polonica; sudor Anglicus; mor-*

concur in deriving it from vitulus, *a calf*, on account of the whiteness of the calf's skin, this disease being, as they suppose, confined to the *alphos* or white morphew; whence it is often erroneously written *vituligo*. That Festus should have led the way to this mistake I am not surprised at; but that Dr. Turton in his Glossary, and Dr. Parr in his New Medical Dictionary, should have copied the mistake, surprises me not a little: for Celsus, who gives an admirable summary of this disease, expressly tells us that it consists of three species, αλφος, μελας, and λευκη, of which the second exhibits a *black* instead of a *white* colour, whence indeed its name: "μελας," says he, "colore ab hoc (scilicet αλφο) differt, quia niger est, et umbræ similis." There can be no doubt that the proper theme of *vitiligo* is *vitio*, "to vitiate, corrupt, or render morbid."

* This disease is denominated by the Arabians with true oriental elegance of language بنات الليل "daughters of the night." The اسارا (essera) appears to have been a species of the same genus.

bus Gallicus, Hungaricus, Garhamensium, &c. *ignis sancti Antonii*, and perhaps *Sardiasis**. In anatomy this absurdity exists to a still greater extent; and has produced several attempts at a reformation both in our own country and on the continent, though, I am sorry to add, hitherto without any success. In our own country the plan proposed by Dr. Barclay is well entitled to attention; and in France the exertions of Dumas, Chaussier, and especially of the indefatigable and much to be lamented Viq-d'Azyr, are too well known to render a detail of them necessary, were it even consistent with the object of this paper. In the brain alone we meet with an assemblage of

* The Arabians have imitated this mode of nomenclature in various instances. It may be sufficient to specify the two following, because they have been copied into our existing nomenclatures: "نار پارسي" Ignis Persicus, a species of anthrax: and "يرقا مديني" or rather اليرقا مديني" literally *vermis medinensis*; but which has more generally been rendered *vena medinensis*. These are both terms of Avicenna: and in quoting him I refer uniformly to the very elegant edition of his works in the possession of the Medical Society. Rom. 1593, folio.

terms so ridiculously diversified in their sources, as frequently to overpower the gravity of the face upon running them over; and at the same time so obscene in many of their references, as to render it impossible to read them except in a dead language.

III. Yet our language is not only not founded upon any common basis, but perplexed by the introduction of synonyms or equivalent terms derived from different languages, in consequence of an almost total want of agreement upon this subject between our best and most approved writers. A few examples will best explain my meaning.

The more common terms among the Greek physicians for a morbid excess of appetite are *boulimiasis*, *cynorexia*, and *lycorexis*; among the Latins, who have merely translated these terms, *fames bovina*, *canina*, and *lupina*: Avicenna uses *bolismos*, and many writers *bulimia*; while others, dissatisfied with the gross idea conveyed by all terms of this kind, have racked their invention for substitutes, and inundated us with their results. Hence Plutarch tells us that the term common in his day was

palulimos; while Cælius Aurelianus employed *phagedæna*, several *addephagia*, and a few *esurigo*. Among the Arabians it is denominated برقود *(jerkud)*.

In like manner *depraved appetite*, or *longing*, is sometimes indiscriminately denominated *citta*, *cissa*, and *allotriophagia*, from the Greek; *pica* and *malacia* from the Latin.

Varicella is a very good name for chicken-pox; but after having learnt to recognise it by this name, the student has also to follow it through many of our nosologists, and through all our medical lexicons, under the name of *variola lymphatica*, as though it were not a distinct genus of disease, but a mere species of small-pox. He has also to follow both these diseases through a wrong etymology in all the writers: each having copied from the others, down to the present hour, in deriving *varicella* from *variola*, and *variola* from the Latin term *varius;* and for this admirable and most satisfactory reason, as they all concur in telling us, *quia variat corpus!* "because it alters the body!" Neither is variola, however, derived from varius, nor is varicella from variola;

nor are either of them derived directly from the Latin. They are both Spanish diminutives, first employed, if I mistake not, by the translators of Haly Abbas at Cordova; the former derived, not from *varius* "changeable," but from *varus* "a pock" or "pimple;" a word still in existence in several of our nosologies, and in old Spanish *vario*, whence the Spanish diminutive *varióla**, since changed in its ac-

* It is probably on this account, for I can conceive no other, that Sauvages calls it a barbarous term, and unites it with *patursa* amongst those which ought to be rejected: *variola et patursa*, says he, *ut barbara, ableganda*. He is speaking, indeed, of variola, in this place, as applied to *syphilis*, and objecting to the misapplication: but this alone could never have induced him to apply the epithet *barbara* to the term itself.

It is generally asserted that the Arabic term for small-pox is *chaspe:* but this is a mistake. *Chaspe* is used by Rhazes and other Arabian writers to indicate this disease: but the word itself is Syriac (ܟܣܦܐ) (ܟܣܦܐ), and, like the same term in Chaldee (כספא), means directly *erubescence:* that flush of red which is often diffused over the cheeks of the modest or the bashful, as indeed the Chaldee root imports in its primary sense (כסף) *pudore suffundi:* whence in the conjugation aphel אכסף *pudefacere, pudore suffundere, confundere.* In Hebrew the same term is employed, and to import the same effect, but by a different means: for in this last

cent to varíola, and literally *little* or *small-pock*. While *varicella*, instead of being derived from *varus* or *varius*, has its root in *varix* (also retained in modern medicine to signify superficial prominences), and which in Spanish is *variz*, and, when employed with a

language כסף implies "to grow pale or wan," from *shame*; and is rather therefore *ignominiâ affici*, than *pudore affici*. *Chaspe* in Arabic, instead of small-pox, means (at least in the form of كسبة) a kind of porridge eaten by the poor.

Among the Arabian writers we meet with a variety of Syriac terms; for many of them were not born in Arabia, but in Syria or Persia. Thus Mesue was born and educated in the former country, and Rhazes in the latter. The works of Mesue were first written in Syriac, and afterwards translated into Arabic: and it is perhaps from him that Rhazes derived the term. The Greek translator of Rhazes renders the Syriac ܚܘܦܐ by ὑλογια, which by many has been supposed to be a mistake for ἐυφλογια, i. e. as Machelli has given it in Latin, *incendium*. The direct medical meaning is ἐξανθημα (exanthema), or, as we have it in English through the medium of the Latin, *efflorescence*. The common Arabic term for small-pox is a literal version of the Syriac *chaspe*, and hence shews very clearly the quarter from which it was derived. This term is سرخيچه (*surchyce*), from سرخه (*surchē*) *rubedo:* or perhaps the superlative form سرخي سرخ (*surchē surch*) *valde ruber*.

diminutive termination to signify minute prominences, *varizella* or *variçella**.

It is hardly necessary to pursue this subject farther. *Rubeola*, which is also a Spanish diminutive from *rubio*, "red," is denominated by Sydenham and Morton *morbilli*; by Sagar *febris morbillosa*; by the translators of Avicenna *variola cholerica*; by Castellus *roseola*. So heart-burn is sometimes styled *cardialgia*, sometimes *pyrosis*, and by Linnéus, after the German writers, *soda*. *Coma vigil* is by Linacre called *marcor*; by Sauvages *typhomania*; by the Spanish writers *modorra*. For St. Vitus's dance we have *chorea*, *chorea sancti viti*, and *scelotyrbe*, all in equal use: the last, however, a very improper term, though introduced under the authority of Galen, since we know, from Pliny, that it was also used among the Greeks to denote local scurvy. Sleep-

* From the middle of the seventh till the middle of the thirteenth century Cordova and Bagdat constituted the two principal Saracen courts, under the names of the Western and Eastern Caliphats. In both these cities medicine as well as other sciences was chiefly cultivated, and hence the introduction of Spanish as well as of Arabic terms into the medical vocabulary.

walking is, in like manner, denominated *noctambulismus*, *somnambulismus*, *hypnobasia*, and *nyctobasis*; night-mare, *incubus*, *succubus*, *ephialtes*, *prigalium*, and *epibole** : epilepsy has still a greater choice of names; and for syphilis they are almost innumerable.

IV. Yet we are not only overloaded with terms to express the same idea; but of these terms a very great number are so loose and indefinite as to convey no precise idea whatsoever, while others, on the contrary, cannot fail to excite a very erroneous one. Let us take an example from some of the names invented to denote the disease last adverted to. Fracastoro, whose muse deserves to have been better employed than in composing a very excellent and classical poem upon so disgusting a

* The Arabians have as many names for this disease as the Europeans: the chief are يرخفج *(jerchefeg)*; برخفج *(berchoefic)*; برخفنج *(berchoefenc)*; اغر بصمق or اغر بصان *(aghyr basmak:* or *aghyr basan)*. Whence the patient himself was called اغر بصر *(aghar basar) ephialte seu incubo laborans.*

subject, denominates it *syphilis**, Astruc *lues*; both which names are, as to their origin, unexceptionable. But when, after Baglivi, it is denominated *morbus Gallicus* (French-pox); and after the French writers, who did not chuse

* Perhaps this name ought to have been written siphilis. The root Fracastoro appears to have had in view is σιπαλος, a term met with in Suidas and Eustatius, and translated *deformis, odiosam et invisam faciem habens.* Thus the etymologists αλλα συ μιν ΣΙΠΑΛΟΣ τι και οφθαλμοισιν ιφηλος. From σιπαλος was formed σιφλος by syncope; a term met with in Lycophron: and from σιφλος Fracastoro seems unquestionably to have derived Syphilus, the name of the hero of the very beautiful poem I have alluded to above, and whom he describes as having brought down this disease upon himself, and the world at large, as a curse for having insulted Apollo, while he was tending the flocks of King Alcithous. The rest Fracastoro shall tell for himself:

Protinus illuvies terris ignota profanis
Exoritur: primus, regi qui sanguine fuso
Instituit divina, sacrasque in montibus aras,
SIPHILUS, ostendit turpes per corpus achores.
Insomnes primus noctes, convulsaque membra
Sensit, et à primo traxit cognomina morbus,
SYPHILIDEMQUE ab eo labem dixere coloni.

Jerom Fracastoro, or Hieronymus Fracastorius, a celebrated physician of the sixteenth century, was born at Padua in 1483, and died in 1553. The poem now quoted from, which is not

to accept the compliment, *lues Neapolitana*, or *lues Bavarica* (Neapolitan or Bavarian-pox), the disease is at least loosely, perhaps erroneously, characterised. The origin of this malady, however, is to this moment a secret, and there is no chance of its being otherwise. It was at first asserted to have been brought home from America by Columbus; but there is no sufficient proof that it had existed in America before its intercourse with Europe: while, although it first appeared in Europe about the time of the return of this celebrated circumnavigator (March 1493), it seems to have preceded his return by some weeks; for at the period of his reaching Seville, to join the Spanish army, in April, it had already arisen and spread itself over Auvergne, Lombardy, and various other parts of Italy; while in the course of the same summer it was ob-

very generally known, is entitled *De Syphilitide;* it is divided into three books, consisting collectively of about 1400 lines; was dedicated to Cardinal Bembo, secretary to Leo X. and was first printed, I believe, at Verona. The edition from which I have quoted is in the British Museum: it is entitled editio tertia: the date 1584, Venice.

served in Saxony, Brandenburg, Brunswick, and Mecklenburg, and especially at Strasburg, as all the German writers concur in admitting*; and according to Fracastoro (who was an eye-witness of the entire progress of the disease, and from his medical reputation, and residence almost on the spot of its first appearance, more largely engaged in the cure of it than any physician of his day) in different parts of Asia and Africa as well as of Europe†.

* See especially *Meiner, Sitten des Mittel Alters: Stumf, Schweitzer Chronick,* lib. XIII.; and *Stettler, Schweitzer Chronick,* lib. VII. See also *Sprengel, Geschichte der Arzneyhunde,* Aug. fol. Theil II.

† " Nunc ad eas contagiones pertranseamus quæ extrinseca magis sentant, incipientes à *Syphilide* morbo: quippe novum et diu nostro orbe incognitum morbum inter alia admiranda, nostra tempestas vidit, qui *Europam fere omnem, Asiæ* vero, atque *Aphricæ partem non parvam* occupavit. In Italiam vero fere iis temporibus erupuit, quibus Galli sub rege Carolo regnum Neapolitanum occupavere, annos circiter decem ante 1500, a quibus nomen morbo inditum fuit, Gallicus appellatus. Galli vero nominis injuriam in nos retorquentes morbum Italum vocant, Hispani paturam, Germani nunc Mevium, nunc Gallicum dicunt, nonnulli vero imposito nomine pudendagram appellavere quod à pudendis inciperet, sicuti et mentagram, qui a mento inciperet; novum morbum apud an-

By Joubert this disease is called *variola magna*, and thus, not to mention the absurd-

tiquos appellatum fuisse Plinius est author: nos Syphilidem in nostris appellavimus."—De Contagiosis Morbis.

I have extracted this passage at some length, because, although the entire history of the disease, as contained in the works of Fracastoro, affords the best as well as one of the earliest accounts that have descended to us, it does not appear to have been consulted by modern writers. From the above passage it is clear that the syphilis, on its irruption, was not, at least *uniformly*, regarded as a disease altogether new; that it was supposed by the writer and others to be a mere revival of a complaint adverted to by Pliny; and that it made its appearance about the same time in Europe, Asia, and Africa. Fracastoro proceeds to state that its peculiar nature was a subject of violent warfare among medical practitioners; and that a dispute of great asperity was long maintained whether it was not brought home by Columbus, and first communicated by the crews of his ships; an opinion, however, to which he did not incline.

One of the earliest German writers who ascribed the disease to the return of Columbus from America is Leonard Schmauss, a physician of Strasburg, whose works were published in 1518; but neither his history nor his arguments are in any degree satisfactory: while his countryman Matern Berlen, a clergyman of Ruffach, and an eye-witness of the first irruption of th syphilis, speaking of it in his history of the Italian expedition of Charles VIII. is perfectly silent as to its Spanish or American origin; and declares it to have been a punishment inflicted by the Almighty on this monarch and his subjects, in consequence of his having carried off the Duchess Anne of Bre-

ity of coupling the adjective *magna* with a diminutive substantive, we have it confounded

tague from the Emperor Maximilian, to whom she had been betrothed.

Among the Spanish writers there are two chiefly who ascribe the origin of the syphilis to an American source; while others, by their silence upon the subject when detailing the particulars of the return of Columbus, give sufficient evidence that they disbelieved the report. Of the two who contributed to spread it, one of them, Gonçalvo Hernandez de Oviedo, affirms that it was conveyed into Italy by Cordova's fleet, which however did not arrive in Italy (Messina) till May 24, 1495, and consequently not till two years after the disease had existed there. The other is Sapelveda, who, in a history of America written in a good Latin style towards the middle of the sixteenth century, roundly asserts that "ex *Barbaricarum* mulierum consuetudine Hispani morbum contraxerunt." But as this writer does not, like his contemporary Fracastoro, enter into the particulars of the controversy, his assertion can go no farther than to the weight of his own individual opinion in a controverted case.

Amongst those who have been most full in their accounts of the voyages of Columbus and the discovery of America, I shall certainly be allowed to reckon Antonio de Herrera. He states his return to have been at the period above specified; he is very particular in detailing the order sent to Lisbon for Columbus to follow the Spanish court, on the moment of his arrival, to Barcelona, to which it was then removed; the highly honourable reception the circumnavigator received; the preparations which were immediately made for his second voyage; the facility with which this

with a disease pathognomonically distinct. By other writers it is denominated with equal

second voyage was fitted out; and the instructions given to him on the occasion. Yet not a hint is added that his crews were unhealthy, that the new recruits dreaded the plague to which (had he brought home the syphilis from America) they must have known they were about to be exposed, nor a single instruction to be provident of their health in this respect. Herrera's words are as follow. *Dieronle ornamentos y cosas para el culto de dios; y la reyna en particular diò uno muy rico de su capilla, mandòse al Almirante que pusiesse diligencia en su partida, y que procurasse de descubrir lo mas presto que pudiesse, si la Isla de Cuba, que avia llamado Juana era tierra firme, y que con los soldanos, y gente Castellana se huviesse con mucha prudencia, tratando benignamente à los buenos, y castigando los malos. Despidiòse de los Reyes, y aquel dia le acompañò toda la Corte de palacio à su casa, y tambien quando saliò de Barcelona.*—Hist. Gen. de las Indias Ocidentales, Decad I. l. ii. c. 5.

One of the best treatises upon this subject is to be found in the Memoirs of the National Institute, entitled, "Observations sur l'Origine de la Maladie Vénérienne, par M. Koch." The writer has examined with considerable accuracy most of the publications in favour of the common opinion, together with the antagonist arguments; and he inclines to a belief that the disease had an American and Spanish origin. Yet it is truly extraordinary that he never once alludes to the name of Fracastoro, nor appears to know that such an author had ever existed: in consequence of which he has by no means been fairly in possession of the whole case. Yet even without the history of Fracastoro be[illegible] M. Koch does not ap-

incorrectness from some single symptom alone, or some single part of the body on which it happens occasionally to exert its chief violence, and hence the unclassical terms of *mentagra* and *pudendagra*; the latter of which, as though to increase the confusion, stands at this moment, in the nosologies of Sagar and Linnéus, to express a merely local affection of a very different nature. From the same absurd principle the Spanish writers termed it *bubo* or *bubos*, the Neapolitans *pellarola*, *orchiarolla*, and *unghiarola*, according as the eyes or skin were chiefly affected.

Mania is universally understood to signify a particular species of madness: but *typhomania*, instead of madness, means a particular species of watchfulness, the αγρυπνον κωμα of the

pear to have been perfectly satisfied with his own conclusion; for he adverts to other causes as having contributed an auxiliary part, and conceives that "la propagation subite et merveilleuse de ce mal, doit etre attribuée, soit à la circonstance de la retraite de Charles VIII. et des lansquenets de l'Italie, soit à l'etonnante dépravation des mœurs, et à l'affreux libertinage qui régnoient en Europe sur la fin du quinzieme siecle." —Tom IV. Morales et Politiques.

Greeks, and the *coma vigil* of the Latins; the سبات اسرم *(subat asarim)* of Avicenna.

Melancholia and *atrabilis* are univocal terms, and were formerly used to express the same idea of a dejection of blood from the liver. In later periods, however, the latter alone has been employed to express this disease, the μελαινα of Hippocrates; while the former, as every one knows, has been imprested to represent the opposite to *mania*.

What can be more different in their commencement than the two genera of fevers denominated *synocha* and *synochus?* Yet a mere arbitrary change in the gender of one common term is all by which we have to discriminate them in the best modern nosologies.

Phagedæna, in Cælius Aurelianus, means canine appetite; in more recent books a corroding ulcer. The wind-pipe, among the Greeks, is denominated both *cricos* and *trachea*: the anatomists and surgeons, as though not knowing which of the terms to prefer, have consented to divide them; the former taking the first, and the latter the second. Hence the rings of the larynx

are denominated *cricoid* cartilages, and all the muscles attached to them are distinguished by words compounded of *crico*, as *crico-pharyngeus*, *crico-thyroideus*, &c. The surgeons, on the contrary, who confine themselves to the latter term exclusively, instead of *crico-cele* and *crico-tomy*, speak only of *tracheocele* and *tracheotomy*. The physicians have made common cause with the surgeons; and hence, instead of cynanche *cricalis*, we have cynanche *trachealis*. The one is perhaps as good a term as the other, but one alone is sufficient; and if the nosologists make their election of trachea as an appropriate term for the *wind-pipe*, how inappropriate, and, to the unlearned, how perplexing is *trach-oma* for a disease of the *eye-lids** !

Stómachus and *stomachicus* are terms that apply to the stomach; *stom-algia* to the tongue, and *stoma-cace* to scorbutus or scurvy. The radical term in all these is the same; and the Grecian etymologist, though

* The Arabian writers have not much improved upon the accuracy of the Europeans, for they use سرخه for both the trachea and œsophagus.

he may disapprove of one or two of the compounds, will have no difficulty in tracing them home. But as every medical student is not a Grecian etymologist, it is impossible for him to be otherwise than bewildered in his vocabulary; more especially when he finds that *stomacace* is also employed by several writers to express St. Vitus's dance.

What is the meaning of *tone?* In therapeutics, in physiology, and in the common language of mankind, *sound and healthful elasticity:* that voluntary reaction or state of extension between antagonist muscles, as Galen has admirably observed after Hippocrates, by which they are removed from a modification of rest; and in which the one yields to the other, not from utter debility, but in a precise ratio to the superiority of power exercised over it*. Whence that class of medicines which contribute to this elasticity or healthful reaction in irritable or weakened organs is denominated *tonics;* while organs which are destitute of it are said to be in a state of *atony*. But if

* De Mot. Muscul. l. ii.

tone be used to imply health, and *tonics* restoratives of health, what are we to understand by the phrase *tonic spasm?* a phrase founded upon an erroneous physiology, perpetually, as I fear, leading us astray in our practice, and applied to a state of muscle in which there is no more *tone*, elasticity, or healthful reaction, than in the frozen strings of a violin. To shew the full force of the absurdity of this phrase, it is only necessary to translate it, and to tell the English reader that it means neither more nor less than *extensible contraction.*

Phrenitis is a common and a very proper term for phrensy or inflammation of the brain; but *paraphrenitis* is employed to express inflammation of the diaphragm. How is this last sense to be explained? The medical lexicographers tell us that the preposition παρα is here used as a diminutive to denote a kind of sympathetic phrensy. Yet nothing can be more superficial; and here, as in the former case, the term is derived from an erroneous physiology. *Phren* (φρην), in *paraphrenitis*, has a reference to the very vulgar but very early opinion of the residence of the soul

in the præcordia; while *para*, instead of diminution or defect, implies proximity—*inflammation around the seat of the soul.* Yet the meaning of παρα is about equally divided between the ideas of proximity and defect in the medical use of the term, and hence the student can derive no precise information from its employment. Thus the *paracme* of a fever means its decline; *paracusis* depraved hearing; *paranœa* defective judgment; in all which παρα is used diminutively: while in *parotis*, *parathenar*, *paronychia*, it implies proximity alone. In paralysis its intention is doubtful, for it may be taken either way*. There are many other prepositions and particles which, in composition, are used in the same indeterminate manner, and considerably augment the confusion of our vocabulary.

V. The last source of imperfection and perplexity I shall take leave to notice is the coinage of new terms upon the coinage of new

* Παραλυσις: from παρα and λυω, *solvo*, *dissolvo*: "a state approaching to that of dissolution:" in which παρα is a preposition of proximity; or "imperfect dissolution," in which it is a preposition of defect.

systems. This has been a very ample and inveterate medium of error, and one which has not only run through our nomenclature, but through our reasonings; and in consequence of its prolific influence the language of medicine is become a curious mosaic of the chief pathologies of ancient and modern times. The dogmatic, empiric, and methodic systems still contribute something; the corpuscular has added much; the humoral still more; the alchemical has kept pace with the humoral, and the geometrical has not stopt far behind. The spasmodic theory of Hoffman and Cullen is, by no means, unamenable to this censure: in effect its phraseology formed no inconsiderable source of the Brunonian opposition, and laid the first foundation of the Brunonian doctrine. Yet the followers of this last system have certainly no reason to triumph. The terms introduced by Dr. Brown are, for the most part, inappropriate in themselves, to say nothing of the looseness with which they are employed, as well in his own writings as in those of many of his warmest advocates: while in the more elegant display of the same theory in the

Zoonomia, the reader perceives, indeed, a light before him, but it is too often the light of a meteor; it dazzles more frequently than it irradiates; and like a meteor too, and in spite of its numerous excellencies and attractions, it has already spent itself and vanished.

It is useless to give numerous examples under this head. The terms *nature*, *non-naturals*; *crisis*; *pores* and *corpuscles*; *acute* and *chronic*; *humour* and *idiosyncracy*; *digestion*, *concoction*, and *dissolution*; *effervescence*, *fermentation*, and *putrefaction*; *lentor* and *error loci*; *sanguineous* and *nervous*; *phlogistic* and *antiphlogistic*; *tonic* and *clonic spasm*; *action* and *debility*; *miasm*, *contagion*, and *infection*; *sthenic* and *asthenic*; *excitement* and *excitability*; *accumulation* and *exhaustion*; *sensitive* and *irritative motions*; *decreased volitions*; *direct* and *reverse sympathies*:—these terms are sufficient to convey an idea of the succession of influences I refer to; and as they are all to be found in our vocabulary, in conjunction, indeed, with a thousand others of similar discrepancy, they cannot fail to point out the extraordinary intertexture, the *discor-*

this concors of the medical language of the day, and to enforce the necessity of its correction.

VI. How this important point may be best accomplished is a question which, if fully entered into, would carry us far beyond the limit which ought to be allotted to a single communication. Nevertheless, I cannot consent to close this paper without offering a few hints upon the subject, so as to fix the notice of those who may have better abilities for the purpose, and induce them to bestow upon it a more critical and minute investigation.

The first point that seems to require attention is to discard all equivocal terms as much as possible; and, in cases where this cannot be done, to assign a fixt and individual sense to every term, and never to employ it in any other sense. Sauvages has set an admirable example of this rule in the synopsis prefixed to the different classes of his nosology: nor has less attention been shewn to it by Dr. Willan in the correct definitions prefixed to his treatise on "Cutaneous Diseases;" a work which in some degree, as the learned author candidly

acknowledges, owes its birth to the Medical Society of London, the outline of it having been honoured with the Fothergillian gold medal for the year 1790.

Another rule I would recommend is that of creating as few new words as possible; and, among those already in use, of confining ourselves to the same term to express the same idea, even where we have a choice of numerous synonyms. The following remark of Galen upon this subject is well worthy of being copied not only into this essay but into our memories: "multo lucidius esse opinor unicuique rei seorsim unum nomen, ipsique proprium, indere, eoque perpetuo uti, cum sciam quod communia nomina, quæ alterum non magis quam alterum significant, auditorem confundunt, et perturbant, ut non cognoscat quid fit tandem quod dicitur, priusquam æquivocum distinguatur*."

The next point to which we should direct our attention is to limit our nomenclature as much as possible to one language alone. It

* De Dyspn. lib. i.

has already appeared that even the nosologies of most repute are a mass of mere gibberish, from their unclassical combination of different tongues that were never meant to coalesce. Of these different tongues there can be no great perplexity in determining which ought to have the preference. Among those of vernacular use there is no one that would be allowed such a precedency: and were such a precedency admitted, there is no one in possession of names sufficient to distinguish of itself every disease of which a system of nosology is expected to treat. Dr. Macbride's system is a sufficient proof of the truth of this observation. His nomenclature aims at being English: yet the names under several of his orders consist *entirely* of exotic terms; and under most of them of Latin, Greek, and English, uncouthly mixt together for the sake of convenience, like foreigners from all countries at a Hamburgh hotel. The only languages therefore that remain to us are the Greek and Latin; and of these two there can be no difficulty in deciding in favour of the former, when we reflect that by far the greater

part of our technology is already derived from it, and that it possesses a facility of combination to which the Latin has no pretensions.

Having thus determined, our next care should be to banish every Latin, as well as every Arabic, Spanish, Italian, and German word in favour of its Greek synonym, wherever such synonym can be fairly traced in the Greek writers. Hippocrates is the first author to whom the nosologist should have recourse for this purpose; and in his failure he may perhaps be best supplied from Asclepiades, Celsus, Cælius Aurelianus, Galen, and Aetius, with an occasional glance at Aristotle as he proceeds, from whom he may frequently glean many a useful term. From these writers the selection should be ample; for a blank of nearly twelve centuries shortly afterwards ensues, in which it will be hardly possible to sift out a word in any degree worthy of preservation: the Arabic writers, who chiefly fill it, having added little except in the case of small-pox, and a few cutaneous diseases, to the common stock of medical infor-

mation, and having nearly confined themselves to writing commentaries upon Hippocrates and Galen. So that I am afraid the judgment which Lord Bacon has passed, in the following passage, upon this long and benighted period, is scarcely more severe than correct. "Scientiæ quas habemus, fere à Græcis fluxerunt. Quæ enim scriptores, Romani aut Arabes, aut recentiores addiderunt; non multa aut magni momenti sunt; et qualiacunque sint, fundata sunt super basin eorum quæ inventa sunt à Græcis.—Etiam non omittendum videtur judicium illud, sive vaticinium potius, sacerdotis Ægyptii de Græcis: "quod semper pueri essent; neque haberent antiquitatem scientiæ, aut scientiam antiquitatis *."

Descending to the fifteenth century, we may again enrich our vocabulary from a few of the writers who then flourished; and may continue to add to it from the most celebrated of their successors. The origin, indeed, of a variety of diseases unknown to the Greeks, such as small-pox, syphilis, sea-scurvy, rickets, to-

* Nov. Organ.

gether with a great increase and diversity in the families of others, as struma and phthisis, will render such an addition absolutely necessary: and the works of Fracastoro, Baglivi, Sydenham, Boerhaave, Sauvages, Linnéus, and Cullen, may be successfully resorted to for this purpose. To Fracastoro, as I have already observed, we owe the term *syphilis*; to Baglivi we are indebted for *hysteria* and many other convenient terms; to Boerhaave the general use of the terminal *itis*, as significative of inflammation. To Sauvages, more than to any other modern author whatever, we are indebted for a revival of a great variety of terms, derived from the Greek physicians, which ought never to have become obsolete. Linnéus and Cullen have shewn far less attachment to a Greek origin, and have been less select in their terms. Yet the former may be said to have given us *atecnia* for *impotence*, a term unquestionably preferable to *anaphrodisia*; and the latter to have naturalized, though he did not invent, *pyrexia*, an elegant and expressive compound, very inadequately expressed by πυρετιον, πυρετος συνεχης, πυρετος συνετικος, or as they are spelt in

Hippocrates, who wrote in the Ionic dialect, ξυνεχης and ξυνετικος*, or indeed any similar phrasing of the Greek writers. Linnéus and Cullen, however, and especially the latter, have great merit as expurgators and proscribers of a vast mass of absurd and useless terms.

The name of Sydenham ought never to be mentioned but with gratitude: he was truly the Hippocrates of his age; yet he has little pretensions to the character of a nomenclator, having rather confined himself to the more important part of marking and describing than of naming diseases; and even in the latter case he has generally preferred a Latin derivation. His *nova febris* has been exchanged with the consent of every one for the *miliaris* of the authors of the *Journal de Medecine.*

From a few other writers, and especially the monogrammists, something may also be gleaned occasionally worthy acceptance. *Nostalgia* is a word of Nenter's invention, and intended to put to flight the *pothopatridalgia* of

* Thus in his Treatise de Morb. Vulg. lib. iii. συμπτωμα ξυνεχεα· διαχωρηματα πουλλα, λεπτα, &c.

Zwinger, in which, to the consolation of every man's lips and ears, it has very effectually succeeded. Morton, I believe, first appropriated the term *phthisis* to pulmonary consumption; and Dover *diabetes*, a word invented by Aretæus, to the disease now known by this name, but for which Galen used *dipsacus*. *Scorbutus* we have received from Germany, principally through Hoffman and Boerhaave; and, however objectionable its source, it has been too long naturalized to be exchanged for any other term. To whom we are indebted for *scrofula*, I know not: Sauvages gives a reference to Allen; but it was certainly in use long before Allen's time. *Struma**, as employed by Celsus, seems to be a preferable term, and is continued by Linnéus. Upon *variola*, *varicella*, and *rubeola*, I have remarked already. *Trichoma* is the invention of Jachius, a term

* This word appears to be derived from the Greek στρωμα, "a congestion, or coacervation," as of straw in a litter, or feathers in a bed; as στρωμα is from στρωννυω or στρωννυμι *sterno*, *dejectum expando humis*. The medical dictionaries and glossaries which concur in deriving it from the Latin *struo* err as usual, and only copy from each other: the terminating syllable of *struma* shews evidently that it is derived from a Greek source.

strictly classical, and in every respect superior to the *plica Polonica* of Starnigel, or the *plica Belgarum* of Schenck.

The Greek terms we are in possession of have chiefly reached us through the medium of Latin authors or translators, and hence they are generally characterised by a latinised complexion, and especially in their terminations. A rule being thus established, it should be adhered to in future; and even the existing exceptions be made to comply with it wherever this can be accomplished gracefully and without constraint. Every one writes *typhus* and *synochus*, instead of *tuphos* and *sunochos*, which are the Greek words; *parorchydium* instead of *parorchudion*. But if this orthography be correct, the *syrigmos* of Sagar and Linnéus should be *syrigmus*; the *causos* of Vogel (if retained at all) *causus*, while his *puosuria* should be *pyosuria*, or rather *pyuria*, which is a more common and a far better compound. In like manner we write *paralysis* instead of *paralusis*, and *lyssa* instead of *lussa*, wherever it is employed, as I think it ought always to be, in the place of *hydrophobia*, a term very unnecessarily

invented by Cælius Aurelianus, and by no means pathognomonic of the disease it is now generally made use of to signify; since the symptom it indicates is sometimes a concomitant of other diseases, and sometimes absent from that to which it gives a name. But if *lyssa* and *paralysis* be the proper mode of spelling, then *lues* and *lume*, which are equally derivates from λυω, *solvo*, *dissolvo*, are strictly speaking improper, and ought from the first to have been written analogously *lyes* and *lyme*. Custom, however, has so long sanctioned the use of *lues*, that I dare not recommend it to be changed; yet the point is of little consequence, as this term has been long sinking under the more common term of syphilis.

The rule of most importance, however, and what, indeed, appears absolutely necessary to a due simplicity and precision in our nomenclature, is that we pay a scrupulous attention to the sense in which we employ the affixed and suffixed particles (sometimes prepositions, but not always so), which are used in compound terms to express the peculiar quality of the disease denoted by the theme or radical.

Nothing can equal the perplexity which at present exists in medical language, or the difficulty which a student, and especially an unlettered student, lies under from a non-observance of this rule.

I have already remarked that the preposition *para* (παρα) is used in such a variety of senses, as, instead of guiding the judgment, to be perpetually leading it astray. The particle *a* (α) is subject to the same observation; being sometimes employed as a negative to indicate total privation, and sometimes confounded with *dys* (δυς) merely to imply morbid or defective action: while, as though to make the balance even, *dys*, which is commonly used to express morbid or defective action alone, is at times also confounded with *a*, to signify total privation. Thus *dys*-menorrhœa, which is often restricted to difficult menstruation, or menstruation accompanied with pain and other morbid symptoms, signifies in Sagar and Linnéus suppressed catamenia, the *a*-menorrhœa of Vogel and Cullen; while, in the Cullenian system, the first order of the class *locales* confounds α, παρα, and δυς, by

using them both synonymously, and in the same latitude of senses.

Algia is a termination frequently and elegantly employed to express pain; but the Greeks had also other words by which to denote the same feeling: and hence unfortunately our nosologists, in a morbid hunt after variety, have clogged the language of medicine with such terminations as *cophus* (κοπος), *odyne* (οδυνη), and often *agra* (αγρα): in consequence of which the student, to his utter confusion, not unfrequently meets with such synonyms as *ostalgia*, *ostocophus*, *ostodyne*, perplexingly and uselessly varied to denote the same common idea of *bone-ach*. In like manner *cephal-algia* is made use of to import head-ach, *gastr-odynia* belly-ach, *pudend-agra* (Lin. IV. i. 58) painful sores in the pudendum, and *oneir-odynia* night-mare, or sleep-walking, in which οδυνη appears to be used without any determinate sense.

Itis, in the same manner, is often employed at the close of words as significant of local inflammation. I do not profess to know very exactly the derivation of this term, nor have the etymologists attempted it for us. Pro-

bably it is ιεμαι, which in the Iliad means *impetu feror*, and if so it is radically appropriate: but it is to Boerhaave, as I have already observed, that we are indebted for the first general use of it in this peculiar sense, and a sense which is now approved and adopted by every one. Yet if *itis* be thus appropriated, it is impossible not to condemn such terms as *rachitis* and *hydrorachitis*, *ascites* and *tympanites*, which have no reference whatever to local inflammation; or *arthritis* in Linnéus's nosology, which has nearly as little; the local inflammations being in this system enumerated under class III. or phlogistici, while arthritis occurs under class IV. or dolorosi. It is farther to be observed, on the contrary, that, in all the nosologies, we meet with a great variety of local inflammations unindicated in the words selected to express them by any such termination as *itis*, and evincing almost every anomaly of termination, as *ophthalmia*, *cynanche*, *pneumonia*, *podagra*, all which occur in Dr. Cullen's class I. or pyrexiæ, order phlegmasiæ.

Rhœa and *rhagia* are terminations capable perhaps of admitting an easy distinction, but which have often been used indiscriminately. Both these, indeed, are employed (with a single exception, to which I shall advert presently) to import a præternatural flux of some kind or other; but *rhagia*, which ought to be regarded as an elision of *hæmor-rhagia*, is usually, and ought always to be limited to a præternatural flux *of blood*, as in *rhinor-rhagia* (epistaxis), *enter-rhagia* (blood from the intestinal canal), and *menor-rhagia:* while *rhœa* is fairly applicable to a præternatural flux of any other sort, as *otor-rhœa*, *gonor-rhœa*, *leucor-rhœa*, *diar-rhœa*, and *perir-rhœa*, a term employed by Hippocrates in the sense of *enuresis*. The single exception I allude to is *menorrhœa*, which imports a natural flux and in a healthy proportion: and to avoid the anomaly resulting from this single exception, I would totally exchange the term for its synonym *catamenia*, or rather for *menia* alone, without the preposition, which is altogether superfluous, and is already omitted in all the

compounds of μην, as also in the Latin homonyms *menses* and *menstruatio**.

Dia (δια) is employed with meanings somewhat different, but possessing in every instance a shade of resemblance, and always involving the idea of separation; as in *dia-betes* and *diar-rhœa*, "a passing or flowing through;" *dia-crisis* and *dia-gnosis*, "judgment or distinction by the separation of symptom from symptom;" *dia-stole*, *dia-stesis*, "dilatation or the separation of part from part." It is not necessary to notice this preposition any farther.

To reduce, then, the anomalies thus pointed out to some degree of regularity, to make them intelligible to the student, and practically useful to the adept, I beg leave to submit the following regulations.

1. Let the particle a (α) express alone the idea of total privation; as in *amentia*, *agalactia*, *amenorrhœa*.

* Hippocrates occasionally uses the term γυναικεια (*gynœcia*, or, in the language of Apuleius, *fœminalia*) instead of *menia* or *menorrhœa*, as in his treatise De Morbis Vulgaribus, lib. I. Æger xiv. γυναικεια δε σμικρα επεφαινετο, πονοι τουτεων παντων ξυνεχεες.

2. Let *dys* (δυς) express alone the idea of deficiency, as its origin δυνω or δυμι most naturally imports, and as we find it employed to express in *dys-pnœa*, *dys-cinesia*, and *dys-phagia*.

3. As an opposite to *dys*, let *en* (εν) be employed as an augmentive particle, as we have it in *en-harmonic*, *en-telechia*, and *en-ergetic*. *En* is not often, indeed, a medical compound, nor do I recollect its being employed in more than two instances; *encephalon*, in which it has the sense of *interior* (a word, indeed, that has been long falling into disuse), and *enuresis*, in which it imports excess, and is consequently used as now recommended. Thus restricted, εν and δυς will have the force of ὑπερ and κατα, but will be far more manageable in the formation of compounds.

4. Let *agra* (αγρα) be restrained to express the idea of simple morbid affection in an organ, synonymously with the Latin *passio*, or the برح (*berh*) of the Arabians.

5. Let *itis* (ιτις) express alone the idea of inflammatory action, as in *cephalitis*, *gastritis*, *nephritis*.

6. Let *algia* (αλγια) express alone the idea of pain or ache, to the banishment of such useless synonyms as *odyne* and *copos* or *copus*.

7. Let *rhagia* (from ῥησσω *rumpo*) be confined to express a præternatural flux of blood.

8. Let *rhæa* (from ῥεω *fluo*) express a præternatural flux of any other kind.

By adopting these few regulations, which, instead of innovating, only aim at reforming, our technology, if I mistake not, would be in many respects equally improved in simplicity, in elegance, and in precision; the student would easily commit it to memory, and the practitioner have a real meaning in the terms he makes use of. To prove the truth of these assertions, the subjoined table will be sufficient, which may be easily extended to any length by the use of other particles or prepositions, or the introduction of other themes or radical terms of the medical vocabulary; a vocabulary at present equally confused and redundant, but which, when thus simplified and cleared of the numerous synonyms and equivalents that overload it, might be reduced to at least a third part of its present length, and be

rendered as much more conspicuous as it would be more concise. The adoption, moreover, of some such regulations as those now proposed, could not be more beneficial to our nomenclature than to our systems of nosology—a branch of medical literature which, whether contemplated under the best synoptic or the best methodic arrangements of the day, stands in need of almost as much correction as our language. But I am overstepping the subject to which I had limited myself; and am trespassing upon one of perhaps still greater difficulty and delicacy, and which I readily leave to those who are better qualified for the task.

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RADICAL

	rhæa	rhagia
Mēn. Menia, Menses.	Menor*rhæa.* Whites. Leucorrhæa. *Sauv.* Menorrhæa alba. *Cul.* Fluor albus. *Alior. Aut.*	Menor*rhagia.* Uterine Hæmorrhage. Menorrhagia rubra. *Cul.* Hæmorrhagia uterina. *Morton.*

		Pous, podos, the Foot. The common Seat of the Gout.

NDS.

algia	itis	rhæa	rhagia.
		Urir*rhæa*. Purulent Urine. Pyuria. *Sauv.*	Urir*rhagia*. Bloody Urine. Hæmaturia. *Sauv. Cul.*
phthalm*algia*. he of the Eye-ball.	Ophthalm*itis*. Inflammation of the Eye-ball.	Ophthalmir*rhæa*. Flux of the Lachrymal Humour. Epiphora. *Sauv. Cul. Lin.*	
O*talgia*. Ear-ach. talgia. *Sauv.*	O*titis*. Inflammation of the Ear. Otitis. *Vog.*	O*tirrhæa*. Morbid Discharge from the Ear.	

Art. II.

MEMOIRS OF THE LATE WILLIAM HEWSON,

Fellow of the Royal and Medical Societies, and Teacher of Anatomy, in London.

By J. C. LETTSOM, M.D. LL.D. &c. Pres. M. S.

Read June 22, 1807.

THE subject of these Memoirs was born on the 14th of November 1739, at Hexham in Northumberland, where his father, William Hewson, had long practised as a surgeon and apothecary, with much reputation. Mary, his mother, descended from the Herons, and allied to many respectable families, was a native of the same town. Young William resided with his parents, and attended at the same time the grammar school at Hexham. At a suitable age he was articled to his father, and at the expiration of his apprenticeship resided some time as a pupil with Mr. Lambert of Newcastle. He was there noticed for his close application to study, and a diligent performance of his professional duties.

In the autumn of 1759, being only twenty

years of age, he came to London, and resided with that distinguished anatomist, the late John Hunter; he attended at the same time the lectures of the no less celebrated brother Dr. William Hunter, who then delivered his anatomical lectures at a house in Covent Garden. The former, at this period, had the charge of instructing the pupils in the dissecting room; but being under the necessity of going abroad with the army in 1760, young Hewson, whose assiduity and skill had attracted the attention of the two celebrated brothers, was requested to take the charge of the dissecting room, in the absence of John Hunter.

Whilst he occupied this station, he not only acquired additional experience in practical anatomy, but likewise obtained such pecuniary emoluments as enabled him to enlarge his plan of studies, and thereby to add to his professional knowledge. However ambitious the youth might have been, vanity was the most distant from his ingenuous mind; but to become the substitute of a Hunter at the age of twenty-one, must afford a convincing proof of the great anatomical proficiency of the pupil.

The prominent object of his coming to the metropolis was the acquisition and increase of professional knowledge; and as soon as his pecuniary resources enabled him further to extend his studies, he became a pupil at Guy's and St. Thomas' hospitals. He attended the medical lectures of Dr. Hugh Smith, and those of midwifery under Dr. Mackenzie.

Dr. Hunter, from want of proper assistance, did not deliver a course of lectures this year (1760), but having experienced the advantages resulting from this practice, he was disposed to resume it, and for this purpose he made proposals to young Hewson to admit him into a participation of his profits, provided he would previously devote one year to professional studies in the College of Edinburgh. A proposal so congenial with his wishes, met his cordial acceptance. He was recommended to the professors by Dr. Hunter and Sir John Pringle; the latter, who was not indiscriminate in bestowing favours, continued his friendship to the latest moments of Mr. Hewson's life. He continued his studies till the autumn of 1762, when he returned to London, and entered into

the proposed agreement with Dr. Hunter, and occasionally delivered the anatomical lectures at the theatre in Litchfield Street.

In the summer of 1765, Mr. Hewson visited France; and, returning through Flanders and Holland, he arrived in London at the commencement of the anatomical course, which he delivered in connection with Dr. Hunter.

In the summer of 1767, he paid a visit to his parents at Hexham. His father was then in a declining state of health, and died on the 8th of November following, leaving a widow and three children, the only survivors of eleven.

In the succeeding summer, Mr. Hewson visited the sea coast of Sussex, more effectually to investigate the anatomy of fishes, which had before led him to the discovery of the lymphatic system in them; and in the winter following his account of the lymphatic system in birds and fishes, and particularly in the turtle, was communicated to the Royal Society, of which body he was soon after elected a member, and in the ensuing year received the honour of the Copleyan medal.

In 1769, Dr. Hunter completed his spacious

house and theatre in Windmill Street, in which an apartment was allotted to Mr. Hewson for his residence. The lectures, which before this time had been given in the evening by candle-light, for want of suitable accommodation, were now delivered in the forenoon. The emoluments derived from them were equally divided; and Mr. Hewson's pecuniary acquisitions from the practice of surgery being also considerable, he was encouraged to enter into the marriage state in 1770, with Miss Stevenson, a lady under the patronage of Dr. Franklin, to whom he was affectionately attached, and to whom many of the letters since published were addressed.

In the subsequent spring he published his "Experimental Inquiry into the Properties of "the Blood," some part of which had previously appeared in the 60th volume of the Philosophical Transactions.

At this time, with the most gratifying prospects before him, he received with equal surprise and regret the resolution which Dr. Hunter now conveyed to him, of dissolving the connection between them in the anatomical

lectures, after the following winter; stating as the reason, that Mr. Hewson having, in consequence of his marriage, removed from under his roof, it was impossible he could attend to anatomy in the manner Dr. Hunter wished an assistant to do. Motives of action can but rarely be ascertained: although Mr. Hewson had acquired considerable reputation as an anatomist, it had been in great measure under the auspices of Dr. Hunter, whose individual celebrity and princely fortune might be expected to place him above suspicion of jealousy towards a coadjutor, in whose scientific acquisitions he might rather have exulted, as having been derived from his own early instructions and subsequent patronage.

In the winter the anatomical lectures were continued in concert. In moments of leisure Mr. Hewson employed himself in making anatomical preparations for his future course: that these were not inconsiderable, may be inferred from the disposal of them after his death, to his friend Magnus Falconar, for seven hundred pounds; an irrefragable proof of the effects of industry and perseverance.

In September 1772 he commenced his own separate lectures on anatomy in Craven Street, which he introduced by a lecture on the uses of the spleen and thymus. During this winter he published a second edition of his "Experimental Inquiry," in 8vo. It was dedicated to Sir John Pringle, as a testimony of his gratitude for the undeviating friendship of this illustrious physician.

In the spring of 1774 he published his work on the Lymphatic System, with explanatory plates, dedicated to his friend the celebrated Benjamin Franklin.

In viewing the situation of our associate at this period, the most gratifying prospects presented themselves, where genius and industry were rewarded with success, and domestic amities with felicity. The theatre in which he delivered his lectures, and expounded his discoveries, was crowded with men of science, as well as with pupils, to listen to a youth grown sage by experimental researches. His practice as a surgeon and accoucheur was extensive: he could contemplate a rising family with pleasure, and as likely to become the

partners of his labours, and his successors in that school of science, which his genius and industry had created. Thus surrounded with immediate enjoyments, and with rational hope anticipating the future, on the 18th of April, 1774, he was attacked with a fever, occasioned by a wound he received in dissecting a morbid body: this induced him to omit lecturing on the 19th; but on the 20th he resumed the task for the last time, and died on the 1st of May, at the age of thirty-five, leaving behind him two sons, and his wife in a state of pregnancy.

His eldest son William died in 1802: the survivor, Thomas Tickell Hewson, is now a distinguished physician in the city of Philadelphia. The daughter, born after his decease, is married to Mr. Caldecott, of the same city; and the widow closed a well-spent life in the year 1795.

Mr. Hewson's papers were most of them first published in the Philosophical Transactions, and were afterwards collected in volumes. These papers appeared in the following order.

1. An Account of the Lymphatic System in Birds; in a Letter to Dr. William Hunter, M.D. F.R.S., and by him communicated to the Royal Society. Phil. Tr. vol. XXIII. p. 217, Anno 1768.
2. An Account of the Lymphatic System in Amphibious Animals, communicated by the same. Phil. Tr. vol. XXIV. p. 198, Anno 1769.
3. An Account of the Lymphatic System in Fishes. Ibid. p. 204.
4. Experiments on the Blood, with some Remarks on its Morbid Appearances. Phil. Tr. vol. XXV. p. 368, Anno 1770.
5. On the Degree of Heat which coagulates the Lymph, and the Serum of the Blood; with an Inquiry into the Causes of the inflammatory Crust, or Size, as it is called. Ibid. p. 384.
6. Further Remarks on the Properties of the Coagulable Lymph; on the Stopping of Hæmorrhages: and on the Effects of Cold upon the Blood. Ibid. p. 398.
7. On the Figure and Composition of the Red Particles of the Blood, commonly called the Red Globules. Phil. Tr. vol. XXVIII. p. 303, Anno 1773.

To these may be added a posthumous work, edited by his friend and anatomical successor, Magnus Falconar, in three parts, in 8vo, anno 1777. The two first parts were collected from the Philosophical Transactions, as well as the first chapter of the third part; but, amongst all his papers, not the smallest note upon the subject of the other four chapters

of this part could be found; the deficiency was, however, supplied by his ingenious successor. The contents are as follow:

Chap. 1.—On the Figure and Composition of the Red Particles of the Blood, commonly called the Red Globules.
Chap. 2.—On the Structure of the Lymphatic Glands.
Chap. 3.—On the Situation and Structure of the Thymus Gland.
Chap. 4.—On the Situation and Structure of the Spleen.
Chap. 5.—Containing an Account of the Manner in which the Red Particles of the Blood are formed, deduced from the Experiments and Observations related in the preceding Chapters.

When we consider the limited education which, from early pecuniary difficulties, Mr. Hewson received, with the labour and time necessarily occupied in making anatomical preparations, and in delivering lectures, we cannot but praise his industry, and admire the number of his discoveries and the extent of his various publications; whilst it is impossible not to regret his premature death, in the moment of eager and steady pursuit of science founded upon the basis of experimental research. His discovery of the lymphatic system in birds

and amphibious animals acquired him early celebrity, as is testified by the honour of the Copleyan medal, and also of a seat in the Royal Society. His claim to this discovery was, however, soon after contested by Professor Monro of Edinburgh, who sent a letter to his brother in London, in which he observed that he had anticipated Mr. Hewson, "by having "injected the lacteals of a turtle; and by hav-"ing mentioned those vessels in birds and fishes "above four years before, and which he had seen "but not injected." That part of the professor's letter which contained this claim was, by his desire, read before the Royal Society, and was desired to be shewn to every body.

This very much surprised Mr. Hewson, as he remembered to have heard Dr. Monro acknowledge, in the spring of 1762 (that is subsequent to the time when he now said he had seen those vessels in birds and fishes), that they were not then discovered; and that he had sought for them in vain, in birds, by a variety of experiments. This was confirmed from the notes of Dr. Haygarth, taken in 1764, while a student at Edinburgh. Besides this, the testimonies of

Dr. Taylor of Reading, Dr. Maddocks of London, and Mr. Hull, Surgeon at Stevenage, went to the same conclusion, and combined to prove Mr. Hewson's just claims to the discovery in question.

The blood, so essential to all the functions of life, has often been the subject of experiment, and much has been acquired as to the knowledge of its constituent parts: probably, however, much remains yet unknown, and particularly the causes of those changes in it which take place in different ages, and in various diseases of the human frame.

The experiments published by Hewson were numerous and interesting, and afforded a solution of many phenomena, both in the healthy and morbid states of the body, that were before unexplained. The cause of the spontaneous separation of the blood into serum and crassamentum has not yet been ascertained. Mr. Hewson found that the coagulation takes place equally in close vessels and in the open air, and that it is not prevented by diluting the blood with water. The history of the changes observable in the state and consistence of the blood, in

consequence of some change in the action of the solids, is related with perspicuity: he attributes, however, the red colour of this fluid to the action of the air taken into the lungs; but the species of air which produced this effect was unknown to him: indeed, the chemistry of animal bodies, which has since been so greatly elucidated by Crawford, Fourcroy, Deyeux, and other distinguished chemists of the present day, was then only in its infancy.

Art. III.

HISTORY OF FATAL EFFECTS FROM THE ACCIDENTAL USE OF WHITE LEAD;

In a Letter to the President,

By JOHN DEERING, Surgeon, F.M.S.

With additional Remarks by WILLIAM SHEARMAN, M.D. F.M.S.

Read October 9, 1809.

At the sitting of January 30, 1809, a verbal communication was made to the Society, by the author of the following memoir, of some extraordinary symptoms, followed by the death of several individuals of a family whom he had attended. It appearing to the members present highly probable that these unfortunate events originated from the poison of lead*, a committee was deputed to investigate and to endeavour to detect the real cause of the fatality; which the following relation fully and satisfactorily explains.

* On the following evening Dr. Shearman delivered the annexed communication, which served to confirm the probability of these suspicions; although Mr. D. had been hitherto unsuccessful in detecting the precise origin of the exciting cause.

Aldersgate Street, Oct. 4, 1809.

IF the following narrative do not convey any important medical information, it may not be wholly uninstructive, as it relates to a domestic calamity, occasioned by a circumstance which at the time was wholly unsuspected; and it may at least inculcate the necessity of a closer investigation of symptoms from causes not fully ascertained, and at the same time evince the fallacy of hasty prognostics.

On the 21st of October last, I was desired to visit Mrs. R., the wife of a respectable tradesman in Aldersgate Street, who complained of violent pain in the scrobiculus cordis, with great soreness of the epigastric region when pressed upon. She had vomited a considerable quantity of bilious matter, and at the same time her bowels were constipated: the pulse was calm and regular, the tongue clean and moist, and there was no symptom of fever present. She immediately took a cathartic, which operated, and an opiate in the evening. The following morning the patient appeared relieved; in the

evening, however, the pains and vomiting recurred, and these symptoms continued for some successive days, in so distressing a degree, that it was deemed advisable to consult the family physician, which was done on November 4, 1808. At this time these symptoms continued as already intimated, without any appearance of fever, and hence the physician was induced to consider the affections as of a rheumatic and spasmodic nature.

In a few days, in consequence of the amendment of the patient, he discontinued his visits. In about a week after this period, a boy in the same family, nearly sixteen years of age, was seized with symptoms exactly similar to those of the preceding case, and similar remedies afforded only partial relief, till at length he was removed into the country, and thereby recovered his health.

A week after the attack of this youth, the eldest child, a boy six years old, was also seized with analogous symptoms, and, the mother having relapsed into her former state, the physician was again consulted on the 19th of November. At this time three other per-

sons in the family laboured under similar affections, and suspicions were now entertained that some poisonous substance might have caused this general indisposition of the family; but after minute investigation no one circumstance was discovered to confirm this suspicion, or to elucidate the source of so extensive a calamity.

The sickness and pain continued unabated in Mrs. R.; but the son, after the period of a fortnight, was deemed in a state of convalescence by his physician, who discontinued his attendance; he was, however, soon after seized with convulsions, and expired within a few hours. Unexpected and severe as this shock was, Mrs. R. afterwards gradually grew a little better. She had hitherto continued to suckle her child, which, it being fifteen months old, she was advised to wean: to this she reluctantly consented. In about ten days afterwards the child became somewhat costive, without any other apparent indisposition; but at this period it was seized with vomiting and convulsions, and suddenly expired. The unhappy parent now experienced a return of her

complaints, and, under a persuasion of the inefficacy of professional aid, she was prevailed upon to consult an empiric, whose attendance, though continued to the end of the year, proved unavailing; and on the 3d of January, 1809, she had the advice of Mr. Chevalier, an experienced surgeon, who considered the patient's complaint to be chronic rheumatism; and by the use of clysters of warm water, oily mucilaginous medicines, fomentations, and vesicatories, she appeared to experience more relief than at any period since the first attack; but, although the vomiting and sickness were less violent and frequent, the pain and soreness of the abdomen, first complained of, never entirely subsided: she was, however, able to sit up and amuse herself with a little needlework, and even to go about the domestic concerns of the family, and Mr. Chevalier had proposed to pay his final visit on the 21st. On the morning of this day she rose at ten o'clock, and within the space of an hour afterwards, whilst standing near the desk of drawers, she suddenly exclaimed, "I am dying!" She was seized with convulsions, which continued till

five o'clock in the afternoon, when she expired.

On the subsequent day, Mr. Chevalier, whose anatomical skill is well known, examined the body by dissection. Neither the thoracic and abdominal viscera, nor the brain, upon the most minute examination, exhibited the least appearance of disease; in short, not the least trace could be discovered of any morbid affection.

With respect to the three other persons already mentioned to have been indisposed, the servant maid, one of them, was conveyed to her friends, and recovered. A sister-in-law of Mrs. R. also recovered; but the third, who was her mother-in-law, died, after lingering under disease till March.

These circumstances having been cursorily communicated to the Medical Society, Dr. Adams, Dr. Hamilton, and Mr. Lawrence, were requested to visit the house of this unfortunate family, and to endeavour to ascertain the cause of the calamity. Every culinary article and the whole premises were accurately examined, but without its leading to any dis-

covery. It appeared, indeed, that Mr. R., the husband of the deceased lady, had purchased a cask of sugar at a sale, a considerable part of which had been disposed of to some friends in the country, who had used it without inconvenience, and hence no suspicion was entertained of this article having produced the fatality in Mr. R.'s family.

In this state of uncertainty, Dr. Laird, another member of the Medical Society, visited the house; and, on examining the cask which had contained the sugar, he observed a white powder adhering to its inner surface, and which, on being heated by the blow-pipe on charcoal, afforded globules of lead in the metallic state.

The mystery was thus at length developed. The sugar had been injudiciously put into a cask which had previously contained white lead. That part of the sugar which was sent into the country had probably been taken out of the middle of the cask, and had never come in contact with the lead; whilst that which was used by the family, having been taken from the side, was impregnated with this me-

tal, and doubtless was the source of the fatal events described.

Of nine persons in this family, who were more or less indisposed, four died, and the effects of the poison appear to have been nearly in the ratio of their respective ages.

The infant, fifteen months old, was attacked and expired within the space of twenty-four hours; the child six years of age survived a fortnight; Mrs. R., aged forty, lingered three months before the fatal event took place; and the mother-in-law, aged sixty-seven, died four months after the attack.

The symptoms in each were very similar. The vomiting, pain in the stomach, and costiveness, marked the attack of the disease; and the soreness of the epigastric region in those who recovered was not removed by medicine, but seemed rather gradually to wear away by time or change of air. The matter vomited was usually of a dark yellow colour, though sometimes green; the fæces were in general dark coloured; but in the case of Mrs. R. they were completely white during the space of twenty-four hours only.

There was a considerable sameness in the medical treatment. The opiates which were given afforded no mitigation of the symptoms, unless joined with cathartics, and aided by fomentations, &c. The countenances of all the patients exhibited a pale, sickly, wan aspect. The pulse in each was slow and regular, rather indeed sluggish, and generally below the natural state; but in no instance was there any symptom of paralysis.

J. Deering.

FURTHER OBSERVATIONS ON THE SAME SUBJECT.

By WILLIAM SHEARMAN, M.D. F.M.S.

The circumstance related in the preceding communication of several persons in the same family being attacked with similar symptoms, differing only in degree, and resembling in appearance those of the colica pictonum, the exciting cause of which could not be discovered after the most accurate research, brings to my recollection an occurrence which happened within my observation several years ago, where this dis-

ease raged with different degrees of violence among a great number of people, produced in all of them by the same unsuspected cause, and which, in its incipient and milder state, from its general prevalence, was not recognised either by the other practitioners of the town where I then resided, or myself, to be the genuine painters' colic.

This town, a sea-port in Essex, contained between three and four thousand inhabitants, and at the time I speak of, very many people, chiefly adults, and a greater proportion of them men, complained of occasional violent colic pains, chiefly occurring after meals, attended with an obstinate costiveness; and although these symptoms were for a time relieved by the use of purgatives and other means, they almost universally recurred. The progress of the disease, even in those cases where it attained its utmost violence, was in almost every instance so insidious and so slow, as to leave us unapprehensive of its true character; which, however, was at length brought to light in the following manner.

An infant, under twelve months, at the

breast, who had been subject to complaints arising from acidity of the food, was tormented with most excruciating pain, apparently in the bowels, attended by a very great degree of constipation, and accompanied with violent straining efforts at evacuation, resembling tenesmus. The sufferings of this poor little child were in the highest degree distressing, and it obtained but temporary relief from the warm bath, laxative injections, those of an anodyne quality, the throwing up into the rectum warm oil, opiates and purgatives combined, or from any treatment whatever that could be suggested. The seeing so unusually severe a case, suggested to my mind the probability that some improper substances had been exhibited to the little patient, and I was earnest in my enquiries to this point. All my endeavours only ascertained that the nurse had occasionally given the child a tea spoonful or two of ardent spirit in its food; a practice, which, although I much reprobated, I knew to be too common among nurses, solely to account for this violent disease. My patient at length fell a victim; and a very short time after, the father of

the child regretting to me the mismanagement of its nurse in giving it spirits, observed, that he himself was occasionally tormented with pains in his bowels, which he was inclined to attribute to drinking a single glass of Hollands and water every night. This induced a suspicion in my mind; and upon dropping into a small quantity of the spirits a single drop of the volatile tincture of sulphur of the old London Pharmacopœia, it assumed a very dark colour, affording a certain evidence of its containing a metallic poison. This Hollands geneva had been bought at the king's excise warehouse in the town, where many hundred gallons were annually sold, that had been seized by the excise officers from persons attempting to smuggle it into this country. The gentleman, grieved at the loss of his child, which he could no longer fail to attribute to its true source, brought up the chief managing officer before the magistrates; when he confessed that the whole of the quantity of Hollands sold at the last sale had been impregnated with sugar of lead, for the purpose of depriving the spirit of the colour which it always

obtained by being kept for some time in the tubs in which it was brought over sea by the smugglers, and the loss of which colour enhanced its price by three or four shillings a gallon. This circumstance afforded an easy explication of the cause of the malady which had so generally prevailed; and henceforth none other than coloured Hollands were exposed to sale at the excise warehouse, as had been the custom previous to this scientific attempt of the above officer, at once to increase the king's revenue and his own.

This recital strongly illustrates the obscurity in which the occasional causes of disease may sometimes be involved; and, as a proof of the difficulty of raising suspicion of the deleterious quality of substances, I may mention, that among those who died on this occasion was a dissenting clergyman, about sixty years of age, a man of good sense and observation, of temperate habits (if the daily custom of taking a glass of spirits and water after supper is not to be considered a deviation from the rules of temperance), whose wife carried on the business of a druggist; and it may be supposed

they were both acquainted with the noxious qualities of the preparations of lead: yet it appeared that the sugar of lead with which this spirit was impregnated had been bought at their house by the exciseman himself, and in quantities of 28 lbs. at a time; but it did not occur to either of them, or to his medical attendant, that the disorder was connected with the drinking of the Hollands. It is to be remembered, that in the early stages we have no certain diagnostic signs by which the colica pictonum can be distinguished from the other species of colic; it is only by its ultimate effects, or by a knowledge of its exciting causes, that we can confidently pronounce concerning the existence of the disease.

W. Shearman.

Art. IV.

HISTORY OF A CASE RESEMBLING HYDROPHOBIA, FROM THE BITE OF A CAT.

By JOSHUA DIXON, M.D., of Whitehaven, Corresponding Member of the Medical Society.

Read Nov. 27, 1809.

MISS J. W., the daughter of Mr. R. W., aged eighteen years, on January 22, six p.m. 1809, when lifting up the valance of a bed, was seized, by the teeth and claws of a cat, in the most ferocious manner. The animal remained fixed on her fingers and hands, and was rather suspended than dragged from the chamber to the stair-case: it was then forcibly, and with considerable difficulty, compelled to relinquish its hold, and soon after was killed. The cat had lived in the house with the family many months, but lately had become wild, and roved in the woods: however, there was no reason to entertain any suspicion of its suffering actual madness. The middle finger of the left hand, particularly the upper side, had received a deep and lacerated wound. The fore finger of the same hand was also injured,

and the whole of the backs of the left and right hands were slightly scratched, but whether by the teeth or claws of the animal could not be determined: this, however, is of no consequence, as the saliva of the enraged or rabid animal must have been generally diffused over the surface of the punctured parts.

Several large and deep incisions were very judiciously made in the direction of the wounds, agreeably to the practice and instructions of the ingenious Dr. Darwin, and spiritus terebinthinæ was liberally applied to them. The wounds healed, and the general health of the patient continued perfect till Friday, April 7. On that morning she walked to a neighbouring town, and from a window, in the house of a friend, beheld a mad dog, pursued by a concourse of people. She instantly and earnestly expressed a sense of surprise, terror, and alarm, returning home very anxious and dejected. The languor remained oppressive to her the whole of the day; and in the afternoon she complained of an unusual stiffness and inability to move her left arm easily, and that its sense of feeling was remarkably impaired. She

expressed an aversion to company, and the least apparent distress of the family gave her exquisite solicitude. The irritations of noise, heat, and light, were offensive to her; she would not approach the fire, nor would permit a candle to be brought near to her. In the night these symptoms, particularly the insensibility of the left arm, were very distressing to her, and effectually prevented any composure to sleep.

In the morning of Saturday, April 8, and in the course of the day, the preceding symptoms became aggravated, and were accompanied with a sense of rigidity and coldness, beginning in the second joint of the middle finger of the left hand, which was chiefly injured, and ascending along the flexor muscles of that arm. These symptoms were at first imputed by the family to her having been lately almost constantly employed in sewing, which required an active exertion of the fore fingers of that hand. An acute pain was also felt, proceeding in the same direction, and terminating in the glands of the axilla, where she complained of a considerable swelling, extending to the

breast; but no tumefaction, hardness, nor enlargement of the glands, could be discovered. Her breathing was sometimes interrupted by sighing, and she felt a painful sensation in her chest.

During the night the above symptoms became still more powerful, and at four in the morning (Sunday, April 9) she was seized with violent convulsive spasms, affecting the whole system, but chiefly the lungs. Respiration for some moments appeared to be totally suspended, occasioning her repeatedly and loudly to express an anxious wish for breath. These fits recurred every eight or ten minutes, and sometimes more frequently. They were violent in degree, but transient in duration. At four P.M. a propensity to vomiting took place. The nausea and retching were almost incessant, but ineffectual to accomplish actual vomiting till six. From that hour the discharges of grumous and bilious matter, sometimes mixed with blood, were frequent and painful.

I visited her at nine, and found her in a state of most imminent danger. She was perfectly collected, but the exquisitely painful irritations

she suffered excited a shrill and loud tone of voice. Her utterance, though distinct, was quicker than natural. The violent efforts of vomiting had considerably dilated but not distorted the features of her face, and their expression was remarkably languid. Since the vomiting had been encouraged the convulsions were weaker, and less frequent, in their recurrence.

When I entered the chamber she was drinking water-gruel, which she almost constantly requested, though it was immediately rejected. Her mode of swallowing it was neither easy nor natural. She appeared to open her throat widely, and greedily gulped down a very small quantity; the strong convulsive spasms preventing free deglutition, and perceptibly interrupting her breathing. I thought it proper to observe the effects of the clearest cold water taken from a large and transparent vessel. She took the glass goblet into her hand, appeared to withdraw herself a little reluctantly from it, but expressed no positive aversion to the fluid it contained, and drank of it, in the same manner as she had done the

turbid and brown mixture of oatmeal and water, the spasms recurring as before: the constant propensity to retching and vomiting was, however, allayed.

I examined very accurately the state of the fingers and hand of the left arm, and found them to appearance perfectly free from any effect of external injury. No discolouration, tension, nor tumefaction of the muscles of that arm, nor of the axillary glands, could be perceived; yet a degree of lividity had been observed upon the lacerated part of the finger, but which disappeared when the symptoms of disease occurred. Pulse 132, quite distinct, but small, tense, and languid. Skin cool; tongue moist; thirst urgent; bowels open. The vomiting continued during the night, and she drank a small portion of any article given her, but with the former convulsive interruptions. Not the least tendency to delirium prevailed.

A little before two in the morning (Monday, April 10), she earnestly and affectionately desired to take leave of the family, and said that she should not live longer than a quarter of an

hour. Her request was complied with, and soon after she calmly and happily expired. The duration of this disease did not exceed fifty-eight hours; and seventy-four days had elapsed from the time of receiving the injury till the first symptoms appeared.

With regard to medical assistance in this disease, the directions given by the original proprietors of the Ormskirk remedies were exactly complied with. The internal medicine was taken immediately, and repeated four days afterwards: the required external application was also made to the affected parts. On Saturday evening, the second day of the disease, twelve ounces of blood were taken from the arm, and the Tonquin preparation of cinnabar and musk was swallowed with considerable difficulty. By these means the symptoms were sensibly relieved, but their recurrence, soon after, was equally violent as before. When I saw her, the only indication which the aid of art could attempt to fulfil was that of allaying irritation in the general system, and of alleviating the distressful power of the

principal symptoms. The warm bath, or any partial employment of it, which the urgent spasms would permit, was first directed, and a cordial draught prescribed, with tinct. opii gtt. lxx. and sp. ammon. comp. gtt. xxx. Its repetition, and the increase or reduction of the opiate dose, could only be determined by the state of the symptoms. In compliance with the usual practice in such deplorable cases, strong mercurial frictions upon the legs and thighs were also employed, and a stimulant opiate plaster would have been applied externally to the throat, when the convulsive agitations were composed, and the inclination to violent vomiting had been allayed. A little before her death she very reluctantly, and with great difficulty, swallowed a small portion of the first draught.

The deplorable malady, whose progress and event have been briefly mentioned, I think cannot be imputed to a lacerated state of the nerves and tendons of the injured finger. If this had been the case, it would have occurred at an earlier period, and must have been attended by its characteristic symptom, a locked

jaw. The pain, ascending from the finger along the muscles of the left arm to the axilla, indicated the absorption and deposition of the rabid matter in the first lymphatic gland, directly connected with the affected parts. The interval from the time of imbibing the poison of rabid animals to the appearance of the symptoms of disease is very uncertain. Sometimes their attack is almost immediate, and violent; but generally thirty or forty days elapse before any suspicious circumstances arise. Instances are upon record where the patient has remained in perfect health for six months, or a much longer period. The causes which excite and bring into action the latent seminia of this disease are those which operate upon the nervous system. Hence it is highly probable that the surprise and terror which this patient suffered on Friday morning, might have occasioned the accession of the disease in the course of the afternoon of that day.

The states, or rather the degrees, of hydrophobia are very different. In some the patient cannot swallow the smallest portion of water, and rejects, even with horror, the glass which con-

tains it, or any article whose dark and polished surface resembles that fluid. In others, no positive aversion is expressed to the appearance of any common beverage; but the attempt to drink it is distinguished by the excitement of a strong convulsive spasm, extending from the throat to the organs of respiration, and from thence to the whole system: the reluctance of the patient arises from the consciousness of this painful difficulty in swallowing. The last noted state of disease exactly applies to that of Miss W.

Accurate dissection, in numerous cases, by the most eminent anatomists and surgeons, has afforded no satisfactory information relative to the cause, nature, or effects of this malady.

In respect to a disease, which, when completely formed, has always resisted the influence of every measure that the experience and judgment of the most sagacious ancient and modern practitioners could suggest, I shall not presume to offer any peculiar mode of treatment, but merely intimate a selection of the means generally approved.

The best, and perhaps the only, effectual expedient to prevent any future apprehension of danger is that of largely extending the wounds, and cutting out the whole of the parts connected with them. No time must be lost; and, if surgical assistance cannot be procured readily, an intrepid friend should employ a keen razor, or sharp knife, for that purpose. As a further security, the actual or potential cautery, viz. the application of a burning iron to the wounded parts, or that of a strong caustic, must be recommended. If the patient is averse to the former measure, the latter must be relied upon. Should both be rejected, cold water poured from an height for a considerable length of time might prove beneficial, alternating it with an affusion of warm water, or of any mucilaginous fluid. The application of kali purum to the enlarged wounds, or the explosion of gun-powder from them, has been advised; by which means the fatal acrimony of this peculiar poison may be destroyed, and a useful discharge excited; which can be afterwards promoted by stimulant mercurial dressings. Frictions,

with ung. mercur. fort., are also proper, to occasion a moderate but constant determination to the salivary glands. Dr. Mead's pulvis antilyssus, Sir George Cobb's Tonquin preparation, or the still more celebrated Ormskirk medicine of Mr. Hill, have obtained high estimation, for their specific efficacy in the cure of this disease: but in the cases of recovery, where they were employed, it was very probable that the wounds had not been inflicted by a rabid animal; or that the poison had either not been imbibed; or, being diluted by the effusion of fluids, had become totally inert.

If the employment of these expedients, though trivial in themselves, can dissipate the fearful apprehensions of the patient, and inspire him with cheerful confidence, they ought to be allowed and encouraged; but always conditionally, that, at the same time, the means most efficacious should be assiduously prosecuted.

When the alarming symptoms of hydrophobia, or of excessive irritability, occur, the general languor and violent spasms will indi-

cate the use of opium, in a liquid form, as more immediately and certainly active; or in a solid one, if constant nausea or actual vomiting prevails. To this, our most powerful remedy, may be added æther, musk, volatile alkali, camphire, and perhaps fœtids: but the separate or conjoined operation of these medicines can be possessed of no efficacy, either in mitigating the urgency of the present symptoms, or of preventing their fatal tendency, unless they are administered in very considerable doses. To prevent the attack, the frequent employment of cold bathing has been recommended immediately after the bite of the animal; and, in some cases, it was supposed to be most beneficial when the patient suffered an apprehension of danger, or had been hastily plunged from an eminence into the water. The convulsive irritations, which chiefly constitute the paroxysm, are allayed by the occasional use of the warm bath.

During a period of nearly half a century I have only had an opportunity to observe one other case of hydrophobia, which occurred when I was a student at Edinburgh. A

girl, aged eleven years, had been bitten in her right arm, by a mad dog, six weeks previous to the appearance of any symptom of disease. She had taken Dr. Mead's prophylactic medicine. No immediate attention had been paid to the wound. It was afterwards dressed with mercurial ointment, and a moderate state of perspiration had been promoted for a considerable length of time. Several symptoms of disease had occurred before she was admitted into the Clinical Ward of the Infirmary; but of them no accurate information could be obtained. She was remitted to the highly judicious care of Dr. Cullen, on Dec. 1, 1765, one P.M., and the following was the train of symptoms which fatally terminated the disease in twenty-four hours.

She appeared remarkably timid and fearful, particularly of the application of any cold substance. She sighed often, and heavily: sometimes spoke rationally; at others very incoherently: the transient convulsive twitchings which she suffered were most perceptible when she was placed in a recumbent posture; and the attempt to carry any article to her mouth

was prevented by an involuntary motion, which instantly gave it a contrary direction: pulse frequent and irregular. She was constantly disposed to sleep, yet the pupils of her eyes were much dilated. Though she could not support the sight or even the mention of water, the appearance of a mirror, at first, was by no means offensive to her: afterwards she withdrew from it with great impetuosity.

At five P.M. nausea, retching, and vomiting, exceedingly distressed her: every medicine administered was instantly rejected; and the symptoms in general were considerably aggravated.

At half past eleven the convulsions recurred more frequently and powerfully: the delirium was constant. She complained of great uneasiness in her throat, and the discharge of saliva, mixed with blood, was very abundant.

December 2, three A.M.—The delirium and vomiting continued violent; and the flow of saliva was still more copious than before.

Four A.M.—The symptoms remained urgent as just described.

Half past five;—The convulsive contrac-

tions were less frequent; but the delirious tendency continued, though she could sometimes reply sensibly to any question.

Half past six:—She was in a state of most profuse perspiration. Pulse calmer, but so languid and irregular as not to be numbered.

Seven:—More delirious, and apparently weaker; but the spasms did not occur so frequently. The cold clammy moisture of the skin was chiefly confined to the upper parts of the body.

Half past eight:—General languor increasing. Her eyes were much contorted, and the pupils considerably dilated.

Nine:—Died, when the pupils contracted a little, but not to their natural size.

The professional attentions to this truly deplorable and hopeless case commenced with cauterizing the cicatrix of the wounded arm. The reputed curative efficacy of the volatile alkali in the bites of vipers was the motive of giving it a preference to any other internal medicine. Thirty grains of it, in a solid form, were taken in the space of two or three hours, with no apparent benefit. A reliance

upon musk and laudanum was equally fallacious. Ten grains of the former and fifteen drops of the latter were exhibited repeatedly; but, as the stomach scarcely retained them a moment, several glysters, containing forty drops of laudanum and twenty grains of musk, were injected, with considerable difficulty; the rapid progress of this fatal disease not being, in the least, interrupted.

From an accurate examination of the body after death, it appeared that the colour of its whole surface was remarkably brown, and that of the nails, with some parts of the arms, had assumed a livid hue. Within the cranium nothing extraordinary could be discovered. The choroid plexus was rather paler, and the superficial veins were a little distended with blood. The fauces, œsophagus, and parts adjacent, were in a natural state; but the effects of inflammation were apparent in the lungs. In the right auricle of the heart was found a large, soft, whitish, and loosely adhering polypus; and in the left ventricle a smaller substance, similar to a collection of inspissated blood. The stomach

contained a little mucus, and two round worms. Several portions of the larger intestines were contracted, and their coats a little thickened. The pancreas appeared redder than usual. All the other parts were perfectly natural.

Art. V.

REFLECTIONS ON THE INDISCRIMINATE USE OF MERCURIAL PREPARATIONS IN MEDICINE.

By W. FALCONER, M.D. F. R. S.

In a Letter to Dr. Lettsom, dated May 5, 1809.

Read May 8, 1809.

THE laws by which the functions of the animal system are regulated, those which direct the effects of disease, and those which guide the operations of medicines, are no doubt equally invariable with those which prevail in the other branches of natural philosophy. But even the latter, though explained on general principles, and on that account appearing to be more familiar to our understandings and conceptions, are nevertheless only partially developed, and we are still in many instances at a loss to determine the extent or the degree to which their operation is carried.

The powers and the effects of medicines are removed still farther from our capacity of examination.

The Father of Medicine seems to lament the inadequacy of the duration of life itself to

the attainment of a proficiency in the art, and adds that the opportunities of success are transient, experiments hazardous, and the inferences to be drawn from them difficult and uncertain; and Celsus, his follower, repeatedly, and from experience, pronounces medicine to be a conjectural art; a truth of which modern practitioners are often more sensible than they are disposed to acknowledge.

It might be expected that this uncertainty would produce diffidence and reserve both in speculation and practice; but the contrary appears to have taken place. Specific remedies, nostrums, and panaceas, were at no time in greater vogue than in those periods of darkness and ignorance, when the very meaning of the terms was scarcely understood. Even in this enlightened age (an appellation which the present race are more ready to assume than posterity will be to allow) the same impositions are as successfully practised as at any former time.

The promises of empirics comprehend in one advertisement, and by the efficacy of a single remedy, the cure of more diseases than

the united skill and recorded experience of all former ages have been able to accomplish; and many of these wonderful cases are exhibited under the strongest apparent attestations of their authenticity, by persons whose rank and character only prove that such pre-eminence affords no security against prejudice and self deceit.

The truth is, that doubt and uncertainty respecting the event are sensations so painful to our nature, that men are disposed to get rid at any rate of their anxiety, even by the sacrifice of their judgment and understanding; and on finding men who regard conscience and moral character averse to giving the assurances of success which they require, they take refuge in promises of relief from those whose judgment on any less important occasion they would hold in the utmost contempt. The absurdity of implicit faith in the decision of beings of our own nature and rank in the line of creation is not confined to religion. Medicine affords numerous instances equally striking, and both perhaps produced by nearly the same cause. The miracles of the Romish

church and the instances of cure produced by empirics bear a strong resemblance to each other; and the practitioners of medicine in this branch have not much fallen short of their religious associates in the extraordinary instances of success which they exhibit.

The darkness in which this science is involved has produced effects not very dissimilar among those who profess to practise medicine on a more liberal and scientific footing. The fluctuations of opinion, and the various and discordant medical systems that have been obtruded on the world, have been so numerous, and both urged and supported so pertinaciously, as might almost tempt an unprejudiced observer to think that the speculations of philosophy and the information derived from experience formed only a chaos of materials which afforded litle assistance towards the discovery of truth, and indeed tended rather to bewilder than to guide those who were endeavouring to explore the paths of science.

The consequence of this uncertainty has been, that men became either confirmed sceptics respecting the effects of remedies, or ran into

the other extreme of selecting peculiar articles, and ascribing to them, if not an indiscriminate efficacy, yet so extensive an use, as to supersede in a good measure their better judgment, founded on that difference of indications which difference of symptoms points out.

Among the favourite remedies which have been thus distinguished, opium, antimony, and mercury, are the principal. The first of these, opium, is well known to be of great and even indefinite antiquity; and, during the long period of our acquaintance with it, has been repeatedly and alternately proscribed as a poison and extolled as a panacea.

Antimony, though of later date, has suffered similar reverses of character. It has been the subject of even legal prohibition and recommendation, as well as the favourite of empirics, from its first panegyrist Paracelsus to the present day. Mercury has likewise attracted the attention of mankind as a powerful agent in the list of the materia medica, and has been the occasion of as much discordancy of opinion respecting its use, as either of the two preceding articles. It is on the indiscriminate use of this powerful and active remedy

that I mean to speak. The effect of mercury in counteracting the power of the venereal virus is universally acknowledged; and whatever may be the pretences of quacks, physicians are now agreed that on the use of this alone the cure depends, and that it merits the title of a specific better than any other remedy with which we are yet acquainted.

This property naturally induced a trial of it on other occasions. But the success attending its use has not corresponded with the expectations of those who founded their hopes on its known effects in syphilis, and the analogies deduced from thence. Mercury, however inert in its crude state, is sufficiently active in its preparations. The forms of these have varied at different times, but the particular effects of mercury are visible in all. In whatsoever form it is administered it acts as a powerful and general stimulant, increasing the number of the pulse, and exciting the action both of the secretory and excretory vessels. Its effects, though sometimes general, are not unfrequently determined to particular organs. Thus it often acts as a purgative, sometimes as a diuretic, and sometimes, though less frequently, as a

diaphoretic. But its specific action seems to be exerted on the salivary glands, to which it appears to have a peculiar determination, whether on account of the ammoniacal salt contained in the saliva, with which mercury is supposed to be particularly disposed to unite, or from some other cause, I cannot form any conjecture. The fact, however, that mercury, in whatever mode administered, is disposed to accumulate in the salivary glands, is evident not only from the local swelling and inflammation which it occasions in those parts, but by the brassy taste it produces in the mouth, and which is peculiar to the active preparations of this metal. From the above effects, and the quality which it certainly possesses of almost universally pervading the animal system, mercury has, and not without plausible reasons, been accounted a general deobstruent; a term, however, of indefinite application, though apparently easy to be conceived. It seems to have had this quality ascribed to it, in the early ages of its employment, from its superior specific gravity to other fluids, by which it was supposed to be enabled to force its way through resistance which lighter fluids were not able to

overcome. This we know was the foundation of its use in the ileus, and some writers had transferred the same notion to its operation on the system at large. But though this reasoning has been long proved to be absurd and frivolous, the character of a deobstruent still continued attached to the medicine, and this supposed effect is in a good degree the foundation of its use in practice to this present day.

But it may justly be doubted whether, in most of the instances in which we have the greatest reason to suspect obstruction to have taken place, as in glandular swellings, the stimulant and inflammatory qualities of mercury are not more likely to lay the foundation of obstruction than to remove it. We know that it inflames, and, to all appearance, causes at least a temporary obstruction, in the salivary glands; and that in the scrophula, which exhibits the most evident marks of glandular obstruction, the use of mercury has been found not only unserviceable, but highly prejudicial.

A state of indisposition, marked by a pale leaden-coloured countenance, defect of appetite, paucity of urine, and a sense of weight

rather than of pain in the abdomen, accompanied with low spirits; a pulse sometimes rather slower than ordinary, but generally irregular in this respect; and often a dry but not harsh or corrugated skin, and a degree of animal heat rather below than above the natural standard; frequently occurs among those who resort to the Bath waters for relief.

This disease is generally ascribed, how truly I cannot say, to mesenteric obstruction; and the hardness of the abdomen, which sometimes accompanies the other symptoms, seems to countenance this opinion. But this hardness is often very variable, particularly in women, and though at times evident, is at others scarcely perceivable. Such cases are sometimes relieved by the use of the Bath waters, especially in female subjects, but I fear the failures are pretty numerous. These instances, however, afford an ample field for the trial of mercurial preparations, especially calomel, which in these as in most other obscure chronic complaints, where no specific indication is suggested, is usually plentifully administered; in a good measure, it must be owned, on an empirical footing. The symptoms above describ-

ed afford but too much reason to suspect scirrhus of some of the viscera, and the ill effects of mercurials in all cases that partake of a cancerous nature are but too well known. If scirrhi of this kind are but of small extent and indolent, they may often by a cool regimen, a milk diet, some assistance afforded to the general health, and a quiet manner of life, by avoiding extremes of temperature and other causes of irritation, be kept from spreading, and contributing much either to embitter or to shorten life. But the administration of mercurials, of all which calomel may in the present age be regarded as the representative, is too apt to rouse the slumbering malady into an active inflammatory state, from the consequences of which few escape, and those few only by such efforts of nature as we have no right to expect, and know not how to promote or to imitate.

In cases of decided hepatitis the bad effects of calomel are still more evident. I had the mortification of witnessing, many years ago, a melancholy scene of this kind in my attendance on a professional gentleman of eminence

in this city. The local uneasiness, distention, and soreness of the hepatic region, the presence of fever, and the great degree of jaundice that accompanied it, marked beyond a doubt the nature of his disease, of which he indeed was as sensible as his attending friends. Unfortunately, he had, from the first symptoms of its appearance, entertained a strong prepossession that mercury was the only remedy that could afford him any material assistance, and had in consequence of this persuasion employed other evacuations very sparingly during the space of three days before I saw him. On my visiting him, I advised a more liberal use of the lancet, a blister to the part nearest to the seat of the pain, and cooling purgatives, particularly clysters; with none of which, a small bleeding of four ounces excepted, he complied, but pursued the very exceptionable method he had before followed, of taking calomel to the quantity of four grains twice or thrice daily, which practice he could not be persuaded to forbear by the joint advice and solicitation of two eminent practitioners whom I requested might be called. The consequences of almost

every dose of calomel were distinctly marked by an increase of the fever, pain, and other signs of local inflammation, and particularly by the increase of the jaundice, which was at last excited to such a pitch, that his perspiration stained the sheets he lay on with a deep tinge of a lemon colour. I need hardly add the account of the unfortunate termination of the disease, which it was manifest to the other physicians, as well as to myself, was greatly aggravated by the repeated doses of mercury which had been swallowed.

Mercurial purgatives are usually administered in simple obstructions of the gall ducts, which often occur without any disease whatsoever of the liver itself. But there appears no reason for this preference; and, indeed, there is cause to think that such a choice is not only unnecessary but improper. Calomel has no specific power in dislodging a biliary calculus; and the preference, as Dr. Heberden observes, "if a course of purging be thought necessary, "should be given to those purgatives which "act with most ease, and may be continued "with the greatest safety; qualities which

"belong more to the purging mineral waters, "and to sea water, than they do to calomel."

But the largest consumption of calomel takes place in those complaints which have gained the appellation of bilious, merely because their symptoms afford no clear marks of distinction of the nature of the disease. This term has nearly superseded that of nervous, which was equally indefinite, and generally denoted that the practitioner had no other appellation to bestow upon it than such a general term as might comprehend three fourths of the maladies that afflict the human race. But, unfortunately, the term bilious, however little information it may convey respecting the nature of the disease, is supposed, nevertheless, to point out the method of treatment. Dr. Heberden observes, very truly, that "wherever the bile is judged to be the "cause of any disorder, there other medicines "are laid aside, repeated purgings are directed "in delicate and weak constitutions, in hypo-"chondriac and hysteric affections, in low "fevers, in persons exhausted with chronical "illnesses, and in other cases in which, upon

"all other accounts, this evacuation would be "highly improper."

This experienced and judicious physician here glances at a practice which was commencing when he wrote the above observations, but had not then reached the pitch of extravagance to which it has since attained. Complaints of an obscure nature are denominated bilious, on a strange and even contradictory supposition that they proceed from either a deficiency or redundancy of bile, or from its depraved or corrupted state; though no marks of any of these faults appear, either in the colour of the skin, or the colour, quantity, or other qualities of the evacuations. It would have been fortunate for mankind if the practitioners of medicine had done in the present age as Dr. Swift satirically describes them to have done in his time, and, for the cure of these imaginary diseases, to have invented imaginary remedies. But, unfortunately, giants have been brought on the stage to combat pigmies, or rather shadows. Every dabbler in medicine prescribes calomel as freely, and on the most trifling occasions, as he

would the most insignificant article in his shop; and this active, and in many instances dangerous, article is employed oftener, I believe, to the destruction than to the preservation of mankind. I might cite all the writers on the materia medica for authorities, that the long continued and frequent use of mercury is not free from danger; that, among other ill effects, it tends to produce tremors and paralysis, and not unfrequently incurable mania. But I have myself seen repeatedly from this cause a kind of approximation to these maladies that embittered life to such a degree, by the shocking depression of spirits, and other nervous agitations with which it was accompanied, as to make it more than commonly probable that many of the suicides which disgrace our country were occasioned by the intolerable feelings that result from such a state of the nervous system. The repeated use of calomel in the complaints usually styled bilious, tends to make its continuance in a manner necessary.

The frequent use of mercury weakens the powers of the organs of digestion in such a

manner, as often to cause considerable accumulation in the bowels of what should be discharged. To relieve the uneasiness which this occasions, purgatives become necessary, and the one which gave rise to the complaint is usually selected in preference; which affords, indeed, a temporary abatement of the uneasiness, but as certainly increases the disease. I have seen the most distressful cases under such circumstances, where the unfortunate sufferers were so attached to what they had adopted as a remedy, as to be with difficulty persuaded to make trial of other less exceptionable means to answer the same purpose.

Mercurial preparations have been much in use, both internally and externally, for the cure of cutaneous eruptions, and particularly the one denominated lepra. As many persons so affected apply to these waters for relief, I have had frequent opportunities, particularly at the Bath Hospital, of observing what regarded the lepra. I suppose mercurial preparations were formerly held in esteem among the professional persons that attended the Bath Hospital, as there was in the pharmacopœia

of that institution a mercurial preparation with the rather pompous title of *guttæ ad lepram*, which I remember to have been frequently in use in obstinate cases, such as sometimes, though not often, resist the efficacy of warm bathing. I cannot however say that I ever saw this medicine of service towards the cure, though some thought it useful in promoting the separation of the leprous crusts. But I never observed it to have any effect of this kind in any case that had not previously yielded in some degree to the warm bath; so that its efficacy in this way was very doubtful.

Instances of the ill effects even of the external application of mercury are sometimes found in the use of what are called quicksilver girdles, which are often worn for the itch, especially by females of the lower rank, as being cleanlier and more free from fœtor than a sulphureous application. Many of these cases have been admitted into the Bath Hospital. The general symptoms were a degree of general weakness approaching to palsy, great pain and tremor in the limbs, and often violent head-ach. It is worth remarking, that an instance lately

occurred in the Bath Hospital of the symptoms that distinguish the poison of lead, particularly the loss of tone in the muscles of the wrists, appearing in consequence of the use of a mercurial ointment for the itch. Something of this kind had been noticed in Sir George Baker's excellent Dissertations; but it seems doubtful if he understood that such symptoms had taken place from the external application of that mineral. As mercury is well known to pervade the skin, it is possible it might introduce the poison of lead, with which metal it is often adulterated, into the system, which without such a conductor would not have found its way.

I cannot quit this subject without remonstrating in the strongest manner against the too frequent practice of administering on common occasions calomel to young children. It has been found, when largely given, to weaken, and even to disorder, the mental as well as the corporeal faculties of grown-up persons; and the use of it at an early age, when the faculties of either body or mind have not acquired strength and firmness, may

both impair the bodily health and debilitate the mental energy of persons who might, but for such imprudent interference, have distinguished themselves when further advanced in life.

I might cite, from good authority, many more instances of the bad effects of the indiscriminate use of mercury; but what I have related has occurred to my own observation, and as such only I offer them to the consideration of the public at large, and especially to persons in the profession of medicine.

Art. VI.

ON THE STAPHYLOMA, HYDROPHTHALMIA, AND CARCINOMA OF THE EYE.

By JAMES WARE, Esq., F.R.S., and Vice President of the Medical Society.

Read May 28, 1810.

ALTHOUGH it be too often the melancholy province of medical men to witness disorders which cannot be removed, and in the treatment of which the utmost exertions of their art can only produce a mitigation of the symptoms, surgery nevertheless, besides affording in this way considerable benefit to mankind, is often highly serviceable in various diseases, by preventing the occurrence of greater evils than those which have already taken place. This observation is strikingly exemplified in those disorders of the eye to which the attention of the Society is now requested; for though all of them have irrecoverably destroyed vision, yet the staphyloma and hydrophthalmia indispensibly require an operation that shall cause the eye to sink in the orbit, in order to obviate constant pain

and uneasiness; and the carcinoma of the eye is only capable of receiving a check, in its tendency to destroy life, by the complete extirpation of that organ.

The term staphyloma is sometimes used to designate the protrusion of a part of the iris through a wound or ulcer of the cornea. This is perhaps its most correct meaning, the Greek word, from which it is derived, implying similitude to a raisin or dried grape. But various authors have also used the term to denote a projecting opaque cornea; and in this sense I propose more particularly to employ it at this time. When the projection is very considerable, the disorder is sometimes also called proptosis; and in those cases where the projection is not confined to the cornea, but occupies also a portion of the sclerotica, as sometimes happens, this latter appellation is peculiarly appropriate.

It has been disputed by authors whether the projection of the opaque cornea, in the staphyloma, is occasioned by a thickening of this tunic, or by a morbid accumulation of aqueous humour behind it. I believe, in

general, both these circumstances combine to produce the disorder; the cornea becoming not only opaque, but both softer and thicker than in its natural texture; and, in consequence of this, the aqueous humour behind the cornea pushes it forward, and thus enlarges the anterior chamber of this humour. I have sometimes seen the whole cornea sloughed off during an acute purulent ophthalmy, and a white opaque substance gradually effused from the ulcerated surface, sufficient to form a complete cover to the iris; after which this opaque body has gradually projected in a conical shape, until at length it has become so prominent as to hinder the eyelids from closing over it. I have at other times seen the projecting cornea partly opaque, and partly transparent; the pupil being distinctly visible through the transparent part, but the power of vision wholly destroyed. Sometimes the circumference of the opaque cornea projects, its central part appearing depressed, and resembling the bottom of a plate or dish; and sometimes, near to the center of the opacity, in the case last mentioned, there is an irregular

black appearance, which a cursory observer might mistake for a pupil. No part of this aperture, however, is perceptible on a careful inspection, and the eye of course is deprived of all useful vision*.

* The cornea not unfrequently projects without losing its transparency, assuming a conical shape instead of that which is spherical; in consequence of which change the eye at first becomes myopic; but when the projection is more advanced, it causes so unequal a refraction in the rays of light as to destroy correct vision. In cases of this description I have repeatedly discharged the aqueous humour, and endeavoured afterwards, by moderate pressure, to prevent the return of the projection; but on the reproduction of the aqueous humour the conical projection has always reappeared. If only one eye be thus affected, the sight of the other remaining perfect, all the purposes of vision will be obtained from this alone; but, if the cornea of both eyes be conical, much advantage may be obtained from wearing spectacles, the rings of which are filled with an opaque substance that has a small hole in its center, not more than the tenth or twelfth part of an inch in diameter, the smallness of which aperture, by lessening the pencils of the rays of light, will prevent the confusion that must otherwise be occasioned by their unequal refraction. Persons who have a projecting cornea should be particularly careful to avoid blows on the eye; since the projection is usually accompanied with a preternatural thinness of this tunic, which renders it easily ruptured: when this happens, the iris is liable to be involved in the wound, and the sight to be more or less injured by the derangement that takes place in the figure and size of the pupil.

So long as the projection of the opaque cornea can be covered by the eyelids without painfully stretching them, if it be not accompanied with an irregularity in the surface of the cornea, and the sight of the other eye continue perfect, the only inconvenience the projection occasions is produced by the unseemly appearance it presents to observers. This may in some degree be prevented by wearing a pair of spectacles containing plain window glass in the ring opposite the sound eye, and glass that is ground in a slight degree opaque, or even similar plain window glass, in the ring opposite the affected eye. In some instances, however, a consciousness of the appearance produced by a projecting opaque cornea has occasioned so much distress of mind, that I have been requested to sink the eye, solely for the purpose of getting rid of the deformity. I wish I could say that milder means have been found sufficient to accomplish the object. Various applications have been proposed for this purpose at different times by different authors. By some, strong caustics have been recommended for

the express purpose of producing an excoriation, and even an ulceration, on the surface of the projecting substance. Both * Janin and † Richter have said that they not only removed the projection of an opaque cornea, but even reproduced its transparency, by the application of the butter of antimony. Janin has recommended this application, for the purpose also of removing that other species of the staphyloma, in which there is a protrusion of part of the iris through an ulcer of the cornea. But I beg leave to observe that caustic applications of every kind should be used with great caution in all diseases of the eye. I have known them occasion violent and long continued inflammations; and, so far from reproducing vision, they have very rarely reduced the prominence of the staphyloma so as to preclude the need of other means to take away the deformity. Scarpa, in his chapter on the staphyloma, expresses himself in a similar way; and has adduced several cases of this disorder in children, in whom an ulceration on the

* Janin sur l'œil, sect. 8, page 389 et sequent.

† Richter, fasciculus 2, page 105 et sequent.

surface of the cornea was kept up by escharotic applications several weeks, and yet no diminution was obtained by it, either in the projection or opacity. If such be the result of the experiment on the eyes of children, it certainly is less likely to succeed on those of adults. The other mode which has been proposed by authors, viz. that of compressing the tumor, and thus restraining it from interfering with the motion of the eyelids, is so difficult to be accomplished, with the necessary accuracy, that I remember only one case in which it afforded any advantage. In this instance a poor man who had a staphyloma of one eye many years, and could not be prevailed on to submit to have the eye sunk, was kept easy by wearing a bandage round his head, not unlike to the spring truss that is used for an inguinal hernia. The bolster of the instrument made a pressure on the outside of the eyelids, which kept them constantly closed, and hindered the eye from moving. In consequence of this, the projection gave no pain; and, by the aid of the other eye, the patient was enabled to work

at a common handicraft business without inconvenience.

The more direct way of affording relief in the staphyloma is by removing the whole of the projecting substance; in consequence of which the humours of the eye are discharged, and the posterior part of its tunics collapse, so as to form a kind of button at the bottom of the orbit. On this button, when the wound is healed, an artificial enamelled eye is capable of resting; by which the uniform appearance of the face may be restored. Authors are not agreed on the best mode of performing the operation. Heister, St. Yves, and others, have proposed to pass a double ligature through the middle of the tumor, and then to separate the threads, and tie the tumor on each side, so that the compression made by the ligature may cause it to mortify and slough off. But this is so painful, and so indirect a mode of accomplishing the object, that I believe it has not been practised for many years. Scarpa, in more modern times, has recommended to us to remove a small portion only of the projecting cornea (agreeable to a mode first proposed by

Celsus in his book de medicina, lib. vii, cap. 7*), and to force out the crystalline and vitreous humours through the opening; after which, he says, the wound will close, and the tunics of the eye collapse to a small size, without occasioning any considerable degree either of pain or inflammation. This mode of performing the operation appears to me, however, to be liable to considerable objections. If the opening in the cornea be not larger than the size of the crystalline humour (which not unfrequently, in cases of the staphyloma, is without disease), this humour, in passing through the aperture, is very liable to bruise the iris, and to bring on pain and inflammation, that are both violent and tedious; and if, on the contrary, the opening be so large as to allow the crystalline and vitreous humours to be discharged, without doing

* The words of Celsus are, "in summa parte ejus ad lenticulæ magnitudinem exscindere." Scarpa proposes to make an opening "two, three, or four lines in diameter, according to the size of the "staphyloma;" but the largest of these dimensions being only one third of an inch, is barely sufficient to allow the crystalline to come through it, without forcibly compressing the iris.

violence to the iris, though the pain and inflammation, consequent on the operation, may not be considerable, yet the place of the evacuated humours will be supplied by a watery humour, which will speedily distend the tunics of the eye to their former size, will do away the possibility of inserting an artificial eye, and will hazard the return of all the old symptoms. Scarpa, aware of these circumstances, mentions expressly, that he has been obliged to irritate the wound three or four different times, after the operation, in order to bring on a sufficient degree of inflammation to cause the eye to collapse. Influenced by these considerations, I have never performed the operation according to this method; and having uniformly succeeded in a considerable number of cases, during a practice of more than thirty years, by performing it in the following manner, I trust that I am justified in recommending my mode of operating to the attention of this Society.

The operator will find it more convenient to stand behind the patient than before him; and the patient should be placed on a chair

sufficiently low to allow the operator to carry his hand with ease over the patient's head. A large crooked needle, armed with a strong thread, should then be passed through the opaque projecting cornea, and, after separating the needle from the thread, a knot should be tied in the latter, at a small distance from the eye, in order to hinder the thread from slipping. The operator having thus obtained by means of the thread a secure hold of the eye, a knife similar to that which is used to divide the cornea in extracting the cataract, or, if this be not at hand, a long sharp-pointed lancet, should be pushed through the sclerotic coat, about a quarter of an inch from its connection with the cornea, and be carried quickly but accurately round the cornea, as nearly parallel to it as can be accomplished. Sometimes, as soon as a puncture is made through the sclerotica, so large a portion of the vitreous humour escapes, as to cause the cornea to become flaccid; in consequence of which the operator may find it difficult to complete the incision round this tunic with either the lancet or the knife: and in this case a curved blunt-pointed

scissars will be found useful to finish the operation. The only objection to the use of the scissars is drawn from the additional pain which it is supposed to give; but the duration of the operation is so short, that the difference between the pain produced by the instruments is scarcely worthy to be named. The hæmorrhage that succeeds is seldom considerable; and the less the eye is examined afterwards, the less danger will there be of pain and inflammation. A compress wet with a saturnine lotion should be applied over the eye, and it should be moistened with this liquor, without being removed, as often as it becomes dry; but no lint or any other application should be put within the lids, since this has been known to give great pain, and in one instance to occasion alarming symptoms. An anodyne should be given after the operation, of greater or less strength according to the age of the patient; but it is seldom necessary to repeat this medicine, since the patient has usually more sound and quiet sleep after the operation than he had for a long time previous to its performance. At the end of about a

fortnight that part of the sclerotica which remained in the orbit will be found to have collapsed, and sometimes a small fungous substance will then protrude through the wound. This in the course of time would subside of itself, but, as the delay may be irksome, the fungus may be easily removed, and with very little pain, by snipping it off with a pair of sharp scissars. The fungus is usually smaller in its neck where it joins the sclerotica than in its top; in consequence of which its removal is effected with very little difficulty; and though it sometimes reappears, it may be snipped off, again and again, until at length the wound will completely close, the inflammation cease, and the orbit become fit to receive an artificial eye. This, however, ought not to be introduced until the inflammation be perfectly removed; and when such an eye is used, it is advisable to withdraw it every night and replace it in the morning, which may be effected with ease by the patient himself, after a short experience. In the choice of the artificial eye, it is not only important that the colour of the iris resemble accurate-

ly that of the sound eye, but the size of the eye should be well adapted to that of the orbit, and the dimensions of the cornea be rather smaller than that of the natural eye. If these rules be not regarded, the artificial eye will give an unsightly stare to the countenance; it will not move, as it ought to do, in unison with the sound eye; and it will be liable to occasion both pain and inflammation. It is of consequence also to know that an artificial eye is apt to irritate after it has been used about a year and a half or two years, and must then be either disused entirely, or its place be supplied by a new one: and it may not be improper to remark, that when an eye has been sunk, if an artificial eye be not introduced, the appearance of the countenance may be much improved by wearing a pair of spectacles with either plain window glass in the circles, or glass that is tinged in a slight manner with a green or blue colour. The reflexion from the glass in the spectacle frame will prevent the deficiency from being noticed, or will only give rise to the supposition of the eye being weak.

I next proceed to consider the disorder called Hydrophthalmia. By this term authors do not in general mean an accumulation merely of the aqueous humour, but so great an enlargement of the whole eye, produced by an increase of the vitreous humour as well as the aqueous, as to cause the eye to occupy an undue portion of the orbit, and to occasion difficulty and pain when the eyelids are closed over it. Thus defined, it may perhaps with more propriety be denominated Exophthalmia than Hydrophthalmia.* In describing this

* Scarpa is of opinion that an accumulation of water between the choroid coat and retina is a common cause of the hydrophthalmia, and he minutely describes a case of this kind which occurred in a child three years and a half old, in which the eye was a third larger than its natural size, the cornea partaking of the increase, in the same proportion as the sclerotica. I have several times observed, on dissecting the eye after death, that there has been an effused fluid between the choroid coat and retina, the vitreous humour being wholly absorbed, and the retina collapsed into a cylindrical, or rather a conical, chord-like substance, its apex arising from the optic nerve, and its basis surrounding the crystalline humour; but, though this effusion had produced a fixed dilatation of the pupil, an opacity of the crystalline, and sometimes a violent deep seated pain in the eye, I have never known it to occasion an enlargement of this organ.

disorder a greater discrimination is required than seemed necessary in the former part of this paper. In the staphyloma, for instance, the opaque projecting cornea designates the nature of the disorder in so plain a manner, that it seems impossible to make a mistake with regard to its nature. But in the hydrophthalmia, which implies an universal enlargement of the eye, some examination is requisite in order to ascertain what occasions the enlargement; whether there be an equal enlargement of all the different parts of the eye; a morbid enlargement of one particular part only; the formation of an adventitious body within the eye; or a projection of the eye in consequence of a substance formed behind it.

Infants are sometimes born with eyes remarkably large and prominent. But if they do not give pain by their pressure, nor interfere with the free motion of the eyelids, and if at the same time the cornea be transparent and the sight perfect, the mere circumstance of their prominence does not call for any particular attention. Sometimes, however, the

eyes of infants, at the time of their birth, are not only remarkably prominent, but the cornea of one or both is universally opaque, without any accompanying inflammation in the conjunctiva, or any morbid discharge from the eyes. Of this I have seen several instances, three of which happened in one family. These were more directly under the care of Mr. Farrer, a surgeon, resident at that time at Deptford. He has described them with accuracy in the second volume of Medical Communications, page 463, published in London in 1790. The opacity gradually diminished; and in less than a year, in two of them, it was quite removed. In the third the cornea did not resume its transparency until the end of the second year. The amendment in these instances cannot be attributed to any particular remedies, since none were used; but it was owing to the *vis naturæ medicatrix*, which in infants, in this disorder, as it also is in many others, is often effectual to restore a healthy state. Mr. Farrer does not mention any particular prominence in the eyes of these children; but, having seen two of them

shortly after the time when Mr. Farrer drew up the account of the cases, I find, by a minute I then made, that the cornea appeared to me remarkably prominent; and that, though the children had recovered a distinct vision, they were all short sighted.—Another case of a similar kind came under my notice about three years ago, in the new born infant of a respectable farmer in Essex. Both corneæ were completely opaque, and both were large and prominent. In this instance, as in those last mentioned, no applications were used with sufficient steadiness to allow me to attribute any considerable degree of efficacy to them; notwithstanding which, when, about four months ago, the child was again brought to me, I had the satisfaction to see the left cornea sufficiently clear to allow the perception of all large objects; the opacity of the right cornea being also diminished round its outer edge, though the greatest part of the pupil was still obscured. I was consulted in a fifth case of the same kind about a year ago. It occurred in the infant of a gentleman in Portman Square. Here, as in the other instances, the corneæ of

both eyes, at the time of birth, were large and prominent, and they were at the same time completely opaque; the child, in other respects, being healthy, and suffering no pain from the state of the eyes. Sanctioned by the successful issue of the preceding cases, no particular remedies were employed; and at the time of my writing this paragraph, which is just a year from the birth of the child, the cornea of one eye is not only perfectly transparent for a considerable space round its circumference, but the pupil can be seen through the diminished opacity that remains in its center; and though the cornea of the other eye has improved less in its appearance, the transparency of this also is evidently increased, and the iris is visible through it, for the space of a line at least round its rim.

In all these instances, the enlargement of the eye was not sufficient to be of serious consequence independent of the opacity of the cornea; and, when this opacity was dissipated, the power of vision was restored. But when, on the contrary, the enlargement is not confined to the cornea, but extends to the sclerotica, and

is so considerable that the eyelids cannot be closed without difficulty, the patient being not only blind, but unable to sleep without the aid of opiates; the prospect of restoring sight is wholly lost, and the only question is, in what way ease may be obtained, and deformity obviated. It does not appear possible to do more than this; nor can even this be accomplished by any other mode than that of diminishing the size of the eye: and the best manner of doing it I believe to be by means of the operation, which has been recommended above in cases of the staphyloma.

Before an operation of so much importance be performed, it is, however, essentially requisite to ascertain that the disease consists solely in an enlargement of the different parts of the eye; and that it is not produced by the formation of purulent matter within the eye; by a morbid alteration in the structure of either its coats or humours; nor by the undue accumulation of adeps, or of any other substance, behind this organ.

When purulent matter is accumulated within the eye, the inflammation and pain, which

both precede and accompany the enlargement, seem fully sufficient to distinguish the peculiar nature of the disorder; and they at the same time point out the necessity of procuring an adequate aperture in the tunics of the eye, through which the matter may be discharged. In a case of this kind, which I was desired to see at a small distance from London, in which a young lady, nine years of age, had suffered agonizing pain several days, the sight of the eye having been lost many years, and the cornea being both opaque and prominent, an aperture had taken place spontaneously on the side of the eye next the temple, just in that part where the cornea is joined to the sclerotica, and through it a small portion of matter had escaped; but the tension of the eye continued, and the wound was only large enough to admit the blunt end of a probe. The propriety of enlarging the aperture naturally suggested itself; and as the eye had not been useful for a long time as an organ of vision, a small blunt-pointed bistoury was immediately introduced through the wound, to the depth of at least a quarter of an inch, and the incision

was carried three quarters of an inch in a direction towards the temple, dividing at the same time the sclerotica choroides and retina, and making a large opening into the body of the vitreous humour. No part of this humour, however, nor any sort of fluid, issued through the wound at the time of the operation. The eyelids were immediately closed, without any pressure being made on the eye, and directions were given to apply an anodyne fomentation, in the same way in which it had been frequently before used. An anodyne draught was intended to be given, but within half an hour the patient fell into a sound sleep, which lasted several hours. She awoke much refreshed and perfectly easy. The wound discharged more or less of matter for a fortnight; the pain did not return; and the eye gradually diminished, so that in a short time it did not appear to be more than one half of its natural size.

Purulent matter is sometimes also formed behind the eye in the adipose substance that supports this organ in the orbit. If the suppuration be quick in its progress, and be not

situated deep, the fluctuation of the matter may be easily felt, and the propriety of discharging it be determined at once; but if, as I have occasionally found, the suppuration be slow, and the matter lie considerably below the surface, the eye will be protruded before any fluctuation can be discovered; and the existence of the matter will only be learned by paying attention to the accompanying symptoms, such as a quick pulse, white tongue, shiverings, &c. In a case of this kind, which occurred in a child six years old, which was attended also by Mr. Hill in Bedford Row, I passed a lancet, on the side of the eye next the nose, a little below the commissure of the eyelids, at least an inch into the orbit, before I reached the matter. On withdrawing the instrument its point was evidently marked with pus. I therefore enlarged the aperture with a blunt-pointed bistoury, and discharged a considerable quantity, which was thick and putrid. It was necessary to preserve the opening by the insertion of a small dossil of lint; on the removal of which, a vent was given daily

to new matter, for a fortnight. Its quantity gradually decreased, together with the prominence of the eye; and at length it wholly ceased, the wound healed, and the child became well. The motion of the affected eye, however, was not quite free toward the nose for several months afterwards.

Encysted tumors are sometimes also found in the adipose substance that supports the eye. A melancholy instance of this kind came under my notice a short time ago. The tumor was first perceived between the orbital process of the os frontis and the globe of the eye, and it gradually increased in size. An attempt had been made to extirpate it; but the greater part was situated so deep, that it was not possible wholly to remove it; and, after a short period, it reappeared, and in a few months completely pushed the eye out of the orbit; after which vision was destroyed, and the eye and the tumor became so blended, as to render it impossible to distinguish one from the other. The united mass increased continually in size, until, before the child's death, it was literally

larger than his head*. Another case of this kind came under my care, about the same time, in a girl about five years of age, who was a patient of Mr. Drew in Gower Street. The tumor had been perceived several months, and, when I first saw it, projected under the upper and outer edge of the orbit, and began to push the eye out of its place. In this instance I made an incision through the eyelid, parallel to the edge of the orbit, sufficiently deep to expose the whole of the fore part of the cyst. I then separated the cyst from the orbit, and, embracing it with a hook, drew it forward, and, dissecting it from all its attachments, brought it away entire. The sides of the wound were afterwards kept together by the use of adhesive plaster, and the cure completed in a few days.

In some instances, again, a projection of the eye appears to be occasioned solely by a morbid accumulation of the substance on which the eye rests in the orbit. The repeated application of leeches, on the temple and fore-

* I presume that this may be considered a case of fungus hæmatodes; though it originated in an encysted tumor situated between the bony orbit and globe of the eye, and did not affect the sight until the eye was thrust out of the orbit.

head, has been found of great use in subduing this morbid tendency. In one case, that came under my own care, the projection was speedily diminished by opening the temporal artery; and, after the hæmorrhage had ceased, by converting the orifice into an issue, the discharge from which became soon very considerable. In another case, in which the protrusion occasioned great pain, and nearly destroyed vision, a perfect cure was accomplished by the application of a large caustic behind the ear. The discharge which it occasioned, when the eschar separated, was profuse; and it was kept up, nearly a month, by the insertion of a dozen peas daily.

Another disorder of the eye, which gradually occasions its enlargement, has by some been called fungus hæmatodes; and by others medullary sarcoma, spongoid inflammation, and soft cancer. This differs so much, both in progress and appearance, from the hydrophthalmia, that it cannot easily be mistaken for it. It more nearly resembles the disorder which I proposed to consider last in this paper, the Carcinoma of the eye, having many symptoms in common with it. The fungus hæ-

matodes seldom attacks the eyes of adults, and is most commonly discovered at an early period of an infant's life. The first symptom that is noticed is a white shining substance in the posterior part of the eye, visible through the pupil in some particular positions of the head, but not in all. One eye is generally attacked some time before it appears in the other. As soon as the whiteness is perceived in the eye, the sight is impaired, and, in a short time, it is wholly lost. At its commencement it bears a slight resemblance to a cataract; but an attentive person will at once discover the difference between the two disorders; the opacity in the cataract lying close behind the pupil, whilst in the fungus hæmatodes it is situated deep in the posterior part of the eye. In the cataract, the pupil retains the power of dilating and contracting in different degrees of light; but in the fungus hæmatodes the pupil never varies its size, and is usually dilated. When the disorder has so much advanced as to destroy the figure of the eye, and to make it protrude beyond the rim of the orbit, it is more difficult to distinguish

it from what has usually been called a carcinoma of this organ. There is still greater difficulty, when, after extracting an eye that contains a fungus hæmatodes, a fresh tumor arises from the bottom of the orbit, which fills this cavity, and continues increasing, until it becomes, as has sometimes happened, as large as the whole head. This difficulty of distinguishing between the carcinoma of the eye and the fungus hæmatodes is, however, the less to be regretted, since the proper treatment of both disorders seems nearly alike; the only known mode of checking the progress, in both, appearing to be the complete extirpation of every part that is diseased. Before recourse be had to the operation, it is necessary to ascertain, as far as possible, that every such part is capable of being removed; since, in both disorders, if the smallest portion that has been contaminated remain, whether it join the organ that is extirpated, or be at a distance from it, the diseased part will infallibly increase, and all the old symptoms be reproduced. The fungus hæmatodes is not always confined to one eye, nor even to both, but sometimes oc-

cupies a large portion of the orbit exterior to the tunics of the eye. It is also accompanied not unfrequently with abscesses and tumors in different parts of the head; sometimes between the pericranium and cranium; and at other times between the cranium and dura mater. These abscesses are not confined to the fore part of the head, having sometimes been found both on the outside and inside of the os occipitis. Distinct portions of matter, and sometimes hard tumors, have also been formed in the dura mater, and even in the substance of the cerebrum; and sometimes under the anterior lobes of the cerebrum, making a compression on the thalami nervorum opticorum. A disease of this kind is by no means new. It has occasionally come under my notice ever since I was a boy, and it has been described by many of our ancestors under the common name of carcinoma or cancer. It may be more correct, however, to distinguish it by the term fungus hæmatodes, or medullary sarcoma, though it does not appear to me to be always easy to ascertain the difference between the two disorders. It has been said that carci-

nomatous affections are always preceded by a hard circumscribed tumor, and that, after an ulceration has been produced, if it be followed by a fungous excrescence, this is of a cauliflower figure, and a hard firm texture; but such cannot be admitted to be the universal progress of these affections, nor is it unlike to that which the fungus hæmatodes sometimes assumes. It may be said with greater correctness that the carcinoma of the eye is a disease to which persons are most subject in the middle or latter part of their lives, whereas the fungus hæmatodes appears in early life, and most commonly in infancy.

The following is the progress of a disorder which I have also repeatedly seen in persons advanced in life, but do not remember in any who were young. By some it may be called fungus hæmatodes, and by others carcinoma, but I shall content myself with describing it. The sight is lost before any change takes place in the appearance of the eye: after this the pupil becomes dilated without any visible opacity in the crystalline humour. This description designates a gutta serena;

but the disorder does not stop here. After a little time the crystalline humour becomes opaque; and soon afterwards shooting pains are experienced, which dart suddenly through the eye in different directions, rarely continuing long at one time. At this period, if the sclerotica be carefully examined, a bluish, or rather a dusky leaden coloured, spot, of greater or smaller extent, will be discovered in it, on one side of the cornea, and sometimes on both. These bluish or leaden coloured spots gradually spread; the eye enlarges either partially or generally; and in a short time it pushes forwards the eyelids, and fills the whole of the orbit. In some instances the bluish enlargements appear as if they were affections of the outer surface of the sclerotica, and only covered by the tunica conjunctiva. In others they are evidently produced by a distention of the whole substance of the sclerotica, which is pushed out and thinned, where the projection appears by the accumulation of a morbid substance within the eye. A few of the blood vessels of the conjunctiva are usually enlarged,

and have a purplish red appearance, very different from that which is produced by a common inflammation. On examining the internal state of these tumors, after their extirpation, the whole of the eye has been found full of the leaden coloured substance I have described; divided, in an irregular manner, by membranous laminæ into separate cells, the contents of which have varied much, even in the same eye, in their degrees of consistence. They are usually firm and solid, but sometimes contain pus in separate cysts, and sometimes also osseous particles that differ much in their shape and size. These tumors are in general produced by an irregular enlargement of the whole eye, involving both its coats and humours; but sometimes the humours are very little altered, the disease seeming to originate in an affection of the tunica sclerotica, which spreads outwards rather than inwards. Sometimes the tumor is confined to one side of the eye, its other side being unaffected. At other times it occupies both sides; and, occasionally, there have been three tumors annexed to the eye, one on each side and one above, all as

large as the eye; this organ being unaltered in size, though deprived of sight.

The progress which the disorder makes is very various. Sometimes a prominence of a leaden colour has continued in the substance of the sclerotica, on one side of the cornea, many years, without giving pain or occasioning any sort of trouble; and, on the contrary, it has at other times increased rapidly, and the enlarged organ in a few months has completely filled the orbit*. It does not appear

* Since these papers were put together I have extirpated an enlarged eye from a gentleman, thirty years of age, who had lost the sight of it many years; but it occasioned no pain or inconvenience until about six months ago, when it began to enlarge, and an increase in its size had afterwards been perceived almost every week. The enlargement of the eye was universal; the blood vessels had a purplish red appearance; there were three bluish spots on the sclerotica, one of which was as large as a sixpence; and the pressure of the eye against the eyelid kept up a constant uneasiness. In a consultation with Mr. Cline, it was judged advisable, as the increase of the tumor was rapid, to recommend the extirpation of it without delay; and, the patient giving his consent,

that medicines or applications have the power of checking or controuling this malignant disorder; and whenever its nature can be clearly ascertained, the only question is, whether it be possible to extirpate completely every part that partakes of the poison. Although it be a melancholy truth that the operation has too often failed, this does not lead to the conclusion that its performance is always improper, since it certainly has not unfrequently succeeded; and I have the satisfaction to say, though I have sometimes failed, I have several times performed it with complete success.

I performed the operation, in presence of Mr. Cline, a few days after the consultation. Nothing unusual occurred at the time; and on examining the tumor afterwards, the humours of the eye were found to be no otherwise affected than by their enlargement, the blue appearances being occasioned solely by an affection of the sclerotica. No accident happened after the operation, and, in less than a month, the wound was healed, and the patient returned, perfectly well, to his home in Kent.

With regard to the mode of performing the operation, I would advise it to be done in the following manner.

The patient should be seated in a clear light, on a chair of a suitable height to bring his eye on a level with the breast of the operator; and the operator should either sit or stand before him, as is most easy to himself. The patient's head should rest against the breast of an assistant, whose left hand should support the upper eyelid by means of a double blunt-pointed hook, the points of which are seven eighths of an inch distant from each other, and his right hand should be at liberty to do any thing that may be desired by the operator. The hands of the patient should be held by two assistants that sit, one on each side, and an assistant should be ready to give the operator instruments, sponges, &c. A crooked needle armed with a strong thread, and well waxed, should then be passed through the whole of the cornea; after which, the needle being cut off, a knot should be tied in the thread, at the distance of about an inch from

the eye, to hinder it from slipping. This thread is more useful in cases where the eye is so much enlarged as nearly to fill the orbit, than when it is smaller; the finger alone, in the former case, being insufficient to incline the tumor from one side to the other, so as to make the room that is required for the proper use of the knife. If the tumor be considerable, the upper and lower eyelids should next be separated, by dividing with the knife the integuments which unite them on the side next the temple. This will give much additional room for the introduction of the knife to dissect the diseased organ from its attachments. The conjunctiva should then be divided round the whole globe of the eye; and afterwards the knife be carried downwards, on that side where it passes with the greatest ease. It is not possible to give precise directions, as to the mode in which the dissection should be conducted; but great care should be taken to avoid wounding the tumor until the point of the instrument has reached the bottom of the orbit. If it be possible, the ope-

rator should introduce his finger with the knife so as to feel the optic nerve, which, together with the muscles of the eye, should be divided as close to the foramen opticum as the instrument can be carried. In general the common strait scalpel may be so directed as to perform this part of the operation with accuracy; but if the tumor completely fill the orbit, it may be useful, in this part of the operation, to substitute for the strait scalpel one that is a little curved. As soon as the optic nerve and muscles of the eye have been divided, the tumor becomes loose, and may be easily drawn out of the orbit, either by the fingers, or by the ligature that was passed through the cornea at the beginning of the operation. The tumor, when removed, should be carefully examined, in order to ascertain if it be entire, or if it be wounded in any part. In the latter case, the orbit should be carefully examined, both with the eye and the finger; and if any portion of the tumor be seen or felt, it should be dissected away. The state of the nerve should also be examined. If this appear white, and of its natural size, a hope may be entertained

that the operation will prove successful; but if it appear of a leaden colour, or be altered in shape or size, there is too much reason to fear that the disease has passed beyond the part which has been removed, and that, sooner or later, a fungus will arise in the orbit, and all the old symptoms be reproduced. The hæmorrhage consequent on the operation is seldom considerable. The arteries that supply the eye with blood are not large; and if a little time be allowed, those that are wounded will contract of themselves. It is desirable to avoid the application of lint or of any other substance within the lids, since it sometimes has given considerable pain; and, in one instance, in which the operation was performed by an eminent surgeon, it was supposed to occasion violent convulsions by its pressure against the divided end of the nerve. It is sufficient to apply over the eyelids a compress of old linen, folded six or eight times, and moistened with the liquor plumbi acetatis dilutus; and to direct the compress to be remoistened, without removing it, as often as it becomes dry. If by accident the eyelid be

wounded during the operation, care should be taken to bring the divided ends together, and to confine them in their natural position either by means of sticking plaster, or of a suture with a small needle and thread. Care should also be taken, before the compress be applied, to adjust the edges of the upper and lower eyelids, so as to hinder one from lopping over the other. If, after the operation, the pain continue violent, an anodyne should be given; and, if necessary, it should be repeated after three or four hours; but its repetition, I believe, will seldom be required. Sometimes, after a week or ten days, the upper eyelid is observed to tuck in under the lower; in consequence of which the upper lashes, by rubbing against the inside of the lower lid, have been known to keep up a painful irritation. This may be obviated by fixing the end of a slip of adhesive plaster on the upper lid, and continuing it lengthways on the forehead, sufficiently tight to make a fold in the skin and hinder the edge of the lid from turning inwards. Cooling medicines, and a spare diet, are necessary for a few days; but

afterwards a light preparation of cinchona, together with a nutritious diet, will be required. As the wound heals, an adhesion usually takes place between the inside of the eyelid and the bottom of the orbit; and when this happens, it is not possible to give the patient the benefit of an artificial eye, as is done after the operation for the staphyloma or the hydrophthalmia; and he must be contented either to wear a compress, bound by a riband over the orbit, or a pair of spectacles, having plain glass in the ring before the good eye, and glass that is either plain, or in a slight degree opaque, in that before the affected eye.

If, unfortunately, after a careful extirpation of a carcinomatous eye, a tumor again arise in the orbit, it is vain to expect benefit from a second operation, and applications of a painful kind should be avoided as much as possible. Art does not appear to be capable of doing more than to palliate the violent symptoms; by anodyne remedies; by evacuations local or general; and by tonic medicines, when the state of the general health renders these expedient.

Art. VII.

Case of Extensive Suppuration of the Liver, with Appearances Resembling Ascites, and which Terminated Favourably.

By Mr. JOHN BURNS, C. M. S., Teacher of Anatomy and Midwifery in Glasgow.

Communicated to Dr. James Sims, late President of the Medical Society.

Read Dec. 15, 1806.

HELEN Campbell, aged twelve, on the 20th of June 1798, began to complain of sickness, pain about the upper part of the abdomen, shooting to the right shoulder, and considerable heat and frequency of pulse. These symptoms having been considered as proceeding from a disordered stomach, an emetic was prescribed; the pained parts were rubbed with some embrocation, and saline draughts were prescribed on account of the fever. Complaining still of pain, especially about the side, a blister was on the 10th of July applied over the lower ribs, and was again repeated on the 15th; but without much advantage. For some days previous to this, the belly had been rather fuller than usual; and,

the swelling having increased, diuretics (such as digitalis, the squill, &c.) had been ordered.

I had an opportunity of seeing her for the first time on the 19th of July, and found the right hypochondrium tumid and painful to the touch, especially near the stomach and toward the lower part. She had pain in the right shoulder, and could not lie with ease except on her back, or inclining to the right side. The tongue was furred; the tunica adnata of the eyē was of a yellowish colour; the urine was high coloured, and deposited a copious pink-coloured sediment. The belly was bound, and the stools, when procured, were of a light colour. The appetite was much impaired, and she had frequent fits of sickness and retching. The pulse was 115, sometimes 120; the body emaciated, and the skin wet with perspiration, whilst a hectic flush pervaded the cheek. The belly was considerably swollen, and a fluctuation could be discovered. The tumor had not so diffused an appearance as is observed in ascites, but was more rounded, as if

a large globe had been placed below the umbilicus.

She was now put upon a course of mercury, which was continued for three weeks, so as to keep the mouth somewhat sore. During this time the symptoms of hepatic inflammation went off, she slept better, and felt easier; but the hectic symptoms continued, and, although the diuretics had not been discontinued, the belly increased in size.

On the 12th of September, the inconvenience from the tension being considerable, and the umbilicus threatening to inflame, she was tapped in the usual way, and about six pounds of well conditioned pus were drawn off*. After this she was considerably relieved: she had no shivering after the operation, nor any attack of pain in the belly, and the inflammation of the umbilicus went off: all medicine was given up, and the strength supported by good diet.

* It is better, I think, when the swelling is considerable, to draw off the matter with a trocar than to allow the tumor to burst, as we can thus take away the fluid slowly, and stop for a time if the patient become faint.

By the middle of October the belly had again swelled, but not to one half of its former size; the umbilicus protruded and inflamed: a poultice was applied, and in a few days it burst, discharging nearly two pounds of matter. For a fortnight, pus continued to ooze out of the aperture; but after this the quantity diminished greatly, the opening healed up, the strength returned, and she has remained in good health ever since.

Art. VIII.

OBSERVATIONS ON THE HARE-LIP.

By ISAAC RAND, A.M. M.M.S.S. C.M.S.

Read May 22, 1797.

NATURAL deficiencies are more frequent in the upper lip than in any other part of the body; but, happily, these are very rare.

Every hare-lip is attended with great deformity: it prevents the child's sucking, and it is with great difficulty a child is nourished without the breast. It excites great anxiety and distress in the mother, lest the deformity should be entailed upon her future progeny, and that at a time when the nervous system is peculiarly irritable from a recent parturition.

These reasons induced me to perform the operation for the hare-lip two days after the birth of two children.

I. The wife of S. H. was delivered, April 4, 1790, of a healthy girl with a hare-lip; a large fissure extending backwards along the whole course of the palate through the velum pendulum palati into the throat, but there was no loss of substance in the bone.

As soon as the mother discovered the deformity of the child, she urged me with the greatest importunity to perform the operation for the hare-lip; and, notwithstanding I could find no precedent in any author for performing it upon so young a subject, the above reasons and the entreaties of the mother induced me to comply with her request. I directed the bowels of the child to be cleansed with clysters; and on the sixth of the month, two days after the child's birth, I performed the operation (assisted by Dr. Lloyd) agreeably to the directions in Bell's Surgery; with only this deviation, that I carried the incision a little way up the aperture in the nose, so as to remove a little of the skin and flesh from the lower part of the septum nasi, and the interior lower part of the ala nasi, without extending it to the cartilage; and I passed the upper pin through the inferior part of the septum and ala nasi below the cartilage, by which I approximated the parts to advantage.

The child being placed upon a pillow on a table, made very little resistance during the operation. I turned her upon her side a few times to prevent the blood's descending either

into the lungs or stomach. After the operation I composed her with a drop or two of liquid laudanum, repeated *pro re nata*, and supported her entirely with clysters. I enjoined the nurse to keep from the child every thing that might excite sneezing or a cough till the accomplishment of the cure.

On the fifth day from the operation I removed the pins: a complete union of the lip had taken place. I then applied two pieces of court plaster across the upper lip to support it. The child cried little during the cure: the scar in the lip was so far obliterated in a few months, as to be scarcely visible. The passing the pin through the lower part of the septum and ala nasi so lessened the aperture from the nose into the fauces, that, soon after the cure, an opening into the fauces could not be discovered but by a critical examination; and, as I passed the lowest pin through the prolabium, there was no such indentation in the lip as commonly succeeds this operation.

In the child's sixth month, I, along with some of the physicians of this town, examined the fauces, and we discovered the alveolar pro-

cess of the maxilla superior and the ossa palati so nigh together, that we could scarcely insinuate a silver shilling between the sides of the fissure at the anterior part of the fauces; and the posterior parts were, at the edges of the fissure, besmeared with coagulable lymph, the harbinger of the union of the coverings of the palate. The regurgitation of the food through the nose in the act of deglutition gradually lessened, and had now entirely ceased.

The efforts of nature in completely uniting the bones in the middle and posterior parts of the fauces were arrested by a diarrhœa, which destroyed the child in its seventh month.

II. Mrs. S., of Worcester, brought her daughter, three months old, September 4, 1790, to this town with a hare-lip, and a fissure of the bones of the maxilla superior, at the least, half an inch wide; the velum pendulum was fissured, but without any deficiency of bone.

After I had cleansed the bowels of the child, I performed the operation in presence of Doctors Lloyd, Kast, and Rand, jun.; alternately

nourished and evacuated the bowels with clysters, and composed it with opiates.

The fifth day I removed the pins; the union of the lip was accomplished: I supported the parts with court plaster for a few days. As I could not remove any part of the interior of the ala nasi nor septum, the aperture from the nose into the fauces was larger than in the child of Mr. H.

This child was much more refractory during the operation, and more difficultly supported during the cure, than the first child.

In September 1792 the parents brought the child to this town. I inoculated her for the small pox: after her recovery I had the pleasure of shewing her to Doctors Kast and Rand, jun. The alveolar process of the maxilla superior, and part of the ossa palati, were completely united; her fore teeth were almost as close together as if she had never had any fissure in the bones; but the lip and gums had a small semicircular excavation where the fissure had been.

Her father informed me this autumn, 1794, that the aperture in the posterior part of the

ossa palati was less than when I saw her in 1792, and that her speech grew better.

III. October 2, 1792, I delivered the wife of J. H. of a healthy girl, with a hare-lip, without a fissure of the bones of the palate.

After evacuating the meconium with clysters, I performed the operation in presence of Doctors Kast, Jackson, and Rand, jun. and treated her in every respect as the two other children, and removed the pins the fourth day: the parts adhered, and a complete cure was effected.

The child was put to the mother's breast a few days after; sucked as well as any child till she was weaned; and is at this time a fine healthy handsome girl, with scarcely a trace of the scar in her lip.

The advantages that accrue from performing this operation at so early a stage of life are many.

Children, for some days after birth, seem to be in a torpid state, and in general require but little nourishment.

They are easily managed, and make no opposition during the operation.

If there is only a fissure in the lip, and

sometimes when there is one in the bones, immediately after the union of the fissured part of the lip, the child is capable of sucking, by which the chance of surviving the infantile state is increased.

The disagreeable impression upon the mother's mind, of propagating the deformity in the family by future births, is removed.

Reasoning, perhaps, upon the use, origin, and insertion of the common and proper muscles of the upper lip, viz. the constrictor, seu orbicularis oris, musculi zygomatici majores et minores, canini, incisorii, et cæteri, might induce a surgeon to perform this operation upon an infant with a hare-lip, and fissure in the bones, as soon as possible after its birth.

Would not the action of these muscles be a constant though small *nisus* after the union of the lips, to approximate the fissured maxilla superior in the progress of its growth, by preventing a disproportionate lateral enlargement of it? Would not, therefore, the maxilla superior, as it enlarges, unite and close the aperture, especially at the anterior part?

I have consulted many chirurgical authors,

but have not discovered any one that has recommended performing this operation at so early a stage of life as two of these children were at, with a view to accomplish an union of the bones.

Mons. de la Faye, in the Memoires de l'Académie Royale de Chirurgie, Observations sur les Becs de Lièvre, page 610, tome premier, mentions the advantages of this operation to a child four years old. " Ce n'est pas là le seul avantage, qu'il en a retiré; il parle distinctement, quoiqu'un peu du nès, defaut qu'il n'auroit plus si son palais étoit entiérement refermé. Je l'ai vû quatre ans après l'opération, et *l'espace de la voute du palais étoit déja diminué*; il y a, par conséquent lieu d'espérer que peu à peu les *os se rapprocheront* au point qu'il n'y en aura plus, et peut-être la nature a-t-elle déja fait ce rapprochement."

In the fifth observation, in the same Memoir, page 617: " Deux ans après l'opération, *l'écartement des os du palais étoit fort diminué*; la même chose n'est-point arrivée à celui dont j'ai parlé dans la troisiéme observation; ce qué doit faire presumer que l'union des parties

molles contribue, quand on la procure de bonne heure, au rétablissment des parties dures. Seroit-ce que l'air qui touche celles-ci sans être modifié causeroit quelque desséchement aux fibres osseuses, et empêcheroit par-la leur allongement, et par conséquent le rapprochement des os? Ce qui est certain, c'est qu'il est avantageux pour ce rapprochement de faire l'opération lorsque le sujet est encore *dans un âge tendre**."

Boston, New England,
Nov. 24, 1794.

* The author seems to have overlooked a paper in the fifth volume of the Memoirs of the Royal Academy of Surgery of France, page 292, in which the French academicians appear to reason in the same manner with the author, and relate cases in which Mr. Busch performed the operation at four and eight days old with success.—EDITOR.

Art. IX.

HISTORIES OF TWO EXTRAORDINARY CASES.

By W. NORRIS, Esq., Surgeon to Charterhouse, and Vice President of the Medical Society.

With an Engraving.

Read January 1810.

TO detail the histories of unusual diseases is not, in general, to communicate any very useful information; the rarity of their occurrence preventing those repeated observations of various individuals which lay the surest foundation of pathological facts; and mankind being less interested about those maladies that are seldom seen than such as are daily met with. Some advantage, however, beyond the mere gratification of curiosity, will be experienced by those of our profession, under whose inspection and care such cases shall come as are here related; and they appeared to me to be the more proper to be communicated to the Society, as such solitary cases are not thought worthy of a separate publication.

The first, which is the only instance of the

kind that I have seen, and which, as far as I know, is yet undescribed, is

A DISEASE OF THE CRANIUM.

CASE I.

Mrs. P., the subject of the following observations, aged 51, consulted me in the month of August 1803 respecting a complaint in her head. After the death of this valuable woman, I requested my friend Mr. Upton, whose patient she was, to favour me with an account of what he had observed previous to my seeing her; and he soon after sent me the following:

"Mrs. P. fell in going down the cellar stairs, "about the middle of April 1803, and pitched "with her forehead against a heap of wood. "She was sick and faint for some short time, "and mentioned the circumstance to her hus-"band on his return home in the evening; "but on the following and succeeding days she "thought little of it. In the beginning of "June following she consulted me respecting "an erysipelatous inflammation on her arm, "without any allusion whatever to the above "accident on her part; nor was there any

" thing in this indisposition which led to any
" suspicion of farther mischief. About the
" middle of July, in consequence of violent
" pain in her head, which she considered as
" rheumatic, she consulted the late Dr. Nan-
" kivel, who prescribed for her during more
" than a fortnight, without any alleviation of
" her sufferings. August 2d, she sent for
" me. I found her labouring under a smart,
" active fever; a hot and dry skin; quick
" pulse, with considerable anxiety and agita-
" tion; and complaining of violent pain in
" her head generally, but especially on the os
" frontis. Upon this bone was a tumour with a
" large, hard base, terminating in a conical
" point, exactly resembling the growing horn
" of a young heifer. This evidently contain-
" ed a fluid, which on the following day was
" set at liberty with the point of a lancet, and
" upon examination, a considerable surface of
" the bone was found bare. In a day or two
" afterwards you were consulted," &c.

August 9th, I first saw this patient, and found her in the state described by Mr. Upton. The bone was bare to the extent of a shilling;

and in the center of this part was an opening large enough to admit the end of a probe.

From a consideration of the previous history, I did not doubt that this was the effect of the fall; and from the violent pain in her head, and the other symptoms, I thought it probable that the dura mater was inflamed and producing pus. I enlarged the opening in the scalp, advised the head to be fomented, and the bowels to be kept open. The symptoms were not so pressing as to demand the immediate application of the trephine, especially as I hoped that the hole in the bone might afford an exit to any matter formed within.

At the end of a week, however, as there was not the least abatement of her sufferings, I applied the trephine in the confident expectation of removing the cause of her pain, for there was not the least appearance of disease on any other part of her head. The operation being over, I was not a little surprised to find that the dura mater exhibited a perfectly healthy appearance; and that there was no other discharge of matter than what oozed from the substance of the bone, and which did not exceed in quantity that which the wound had been daily produc-

ing. Some temporary alleviation of pain followed; but which was, I think, entirely attributable to the medicines that were prescribed for her.

In the course of a week she complained of pain toward the posterior and upper part of the left parietal bone, and I there discovered a little tumour which was tender to the touch and contained a fluid. This I immediately opened, and found the bone bare. After a few days, this portion of bone, of the size of a sixpence, separated, leaving a healthy granulating surface, and the wound very soon healed. She, however, still continued to be much indisposed, and complained of pain all over the head; but no other appearance of disease could be discovered until after eight or ten days more, when exactly such another tumour appeared on the opposite side of the head, which being opened, another piece of bone, almost separated; presented itself.

To notice the weekly, often daily, occurrences of this kind which took place, would be unnecessarily to occupy the time of the Society; let it suffice therefore to observe, that more than two days rarely passed without a

tumour appearing on some part of the head which contained matter, and which, being opened, exposed a piece of bone either detached or nearly so. The separated pieces of bone, for exfoliations I cannot properly call them, were, during the first two or three months, from the outer table only of the scull; after which time the dura mater was generally exposed by the separation of each piece, and the wounds in the scalp no longer healed. At length, worn out with suffering, she was relieved by death on the 10th of May, 1804.

Lest it should be supposed by any one that this disease had its orgin in syphilis, it is proper to observe that the patient had not one other, even doubtful, symptom of that disease; and that, from the most minute inquiry that I could make, it seemed almost certain that she never had been infected by its poison. Whether this disease commenced in the bone or in the absorbents of the part, I cannot take upon me to say; but to the extraordinary activity of those vessels is entirely to be ascribed the separation of the various pieces that were detached from without, and the silent disappear-

ance of others from within the cranium. This will be evident to those who examine the inside of the scull here described, which I have the satisfaction of submitting to the inspection of the Society*. Had the patient survived a few months longer, not a vestige of the upper part of the scull would have remained; and it is worthy of remark, that whenever any separation of bone had taken place, there was no endeavour on the part of nature to supply the deficiency by the formation of new bone.

The other case which I have the honour of presenting to the Society, and which is the only one of the kind that has occurred to me, is perhaps no less extraordinary than the preceding. The subject of it will be my apology for giving its history in the Latin language.

Case II.

DE SATYRIASMO.

Quidam ad me venit, concilium petens, ore macilento, formâ squalidâ, facie cadaverosa, quem in proclivi erat credere, carceris profu-

* See the Engraving at the end.

gum, & jam fame morboque consumptum, vix diutius vitam sustinere posse. Universa corporis ægritudine laborare se questus est, ita tamen, ut dolore nullo præcipuo, nisi tardo quodam sed minime acri circa anum afficeretur, in qua parte, paucis ante mensibus, ictum acceperat. Iste dolor ægrotanti ipsi haudquaquam in causa morbi erat; quippe tantum a me interrogatus in ejus mentionem incidit. Affirmavit vero totam sui corporis invalitudinem, quæ cito vitæ ipsi finem erat impositura, *nimio veneris usui* tribuendam esse. Subito mihi in mentem venit stare coram hominem discinctum & impurum, qui intemperantiâ suâ morbum in se traxerat, ideoque rogavi quamdiu hac libidinosa cum fœminis consuetudine destiterat. Omnia vero alia—et mihi admirationem haud levem movit ille, qui respondit, se moribus fuisse semper castis & sobriis; atque isto, quem prius memoraverat, & qui indies magis magisque ingravescebat, *furore*, intra duos tresve menses correptum fuisse. Risum vix tenebam, cum dudum intellexi hominem annum ætatis agere sexagesimum septimum. Cum tamen in ipso nihil non fide dignum videbam, narra, inquam, mihi, qualis

tibi vitæ fuit ratio. Respondit annum circa vicesimum sextum ætatis suæ se uxorem primùm duxisse, ex qua duo sibi nati sunt liberi: quâ vero mortuâ alteram sibi quadragesimo jam & sexto ætatis anno nuptam esse uxorem, quæ ipsa prius ex altero marito duo liberos pepererat, & jam vidua triginta annos nata est. Ex hac porro, inquit ægrotus, duo alteri mihi procreati sunt liberi: sed nunquam memini, me in venerem propensiorem fuisse, nedum insana & insatiabili libidine permotum, ante hos duos menses, quando me diro hoc & teterrimo correptum esse morbo sensi; cujus vis tanta est & tam effrænata, ut expleri nequeat; & ad coïtum cum uxore me singula nocte, quindecies saltem, imo vicies nonnunquam impellat. Hic vero cum ægrotantem meum priapismo laborantem se fallere augurabar, & fortasse nullâ seminis jacturâ in venerem ruere, paulo curiosius id ab illo quæsivi. Affirmat autem se vix in lecto decumbentem corpus uxoris contingere, cum, tanquam œstro percitus, in repetitam venerem properat, neque unquam nisi pleno coïtu res peragitur: seminis quidem emissio potius angere quam voluptate afficere visa est. Narratio plane mirifica erat;

& cum affectionis causam non minus quam rei veritatem penitus explorandam esse censerem, rogo an mihi liceat cum uxore colloqui. Imo, inquit, id ipsa summopere vult, quippe admodum invalida tuique indiga concilii. Eo visum, & reperio fœminam matronali pudicitia & gravitate decoram, quæ omnia dudum a marito narrata amplissimo testimonio comprobavit; adjecitque, se propter noctes continuo insomnes & inquietas multa lassitudine corporis ægram esse; & propter vim sibi toties oblatam pudenda sibi tumore & dolore affligi. Cum de constanti in coïtu immissione seminis rogarem, fidem fecit, virum omnia vere dixisse; nunquam enim *aliter* ab illo rem actam fuisse. Quibus verbis ea facilius & libentius credidi, quod mulierem bis nuptam & ex utroque marito bis matrem experientia satis hæc edocuerat; neque omnino constabat cur hi ægrotantes me fallere conarentur. Ergo utrique fidam habendam esse censui. Locum vero attrectanti mihi, in quo vir ictum acceperat, sub sede glandis prostatæ tumor inventus est parvus & tactui durus, versus anum vergens. Digitis compressus ægrotanti dolorem sed not acutum

dedit: cutis porro tumorem tegens colorem haud mutaverat. Medicinam præscripsi tonicam, mandavi ut cibo generosiori vesceretur, partique morbidæ fomenta cum malagmate applicaret. Septem intra sequentes dies tumor multum crescere, intraque mensem mollior fieri, quando, incisione facta, glutinosi & saniosi profluxit humoris abunde. Paulo post omnia morbi indicia excedere, & vulnus facile sanatum fuit. Quid multa? Ægroto salus pristina redintegrata est. Crediderim istum humorem primitus e vesiculis seminalibus erupisse; partibusque istis inflammatis irritationem ortam singularem hunc morbum peperisse.

Art. X.

ON THE MEDICINAL PROPERTIES OF SANGUINARIA CANADENSIS*, OR BLOOD ROOT.

In a Letter to the President from Dr. N. SMITH, Hanover (North America).

Hanover, Feb. 1807.

Sir,

THROUGH the politeness of Mr. Hall, the bearer, I transmit to you the root of an American plant of which I have not been able to find an account in any European publication. I know it by no other name than that of Blood Root, which is the vulgar name for it here; a name it probably received from

* The reader will perceive that in the following letter the plant is called *Blood-root* alone; Dr. Smith acknowledging himself unacquainted with its botanical name. Upon a minute examination, however (at the request of the Council of the Medical Society), as well of the specimen sent, as of the loose description given, I have no hesitation in denominating it as above.

The Sanguinaria is a genus of the polyandrian, monogynian class and order; generically characterised by having a two-leaved calyx; eight petals; and an ovate single-celled silique.

We know of but one *species* S. Canadensis, Canadian Sanguinaria, Puccoon, or (as denominated above) Blood-root. Root tuberous, reddish; scape simple, one-flowered, with a

the circumstance of its having a red juice which issues from the fresh root when recently cut or broken. As I have not any of the leaves or flowers by me, I cannot be very particular in describing it.

Blood Root is a perennial plant growing wild in the woods. The leaf and flower-stalk spring directly from the root. It has a small beautiful white flower, I think about five petals, more than twenty stamens, and one pistil. The

single leaf issuing from each, and unfolding into lobes. The tuberous root is thick and fleshy, placed transversely, and throws forth many slender fibres or radicles (which are the parts referred to by the term *root* in the paper) of a reddish saffron colour, and yielding a juice of the same hue, of a bitter and acrid taste. A similar juice flows forth also on cutting the leaves and footstalks. These leaves and flower-stalks are radical, as described in the letter, but the plant is *not* perennial. The stems issuing from the root are slender, round and glabrous, of a palish-green hue, or of a brownish-purple: the flowers are white and terminal; the petals are at first concave, then flat, and at last rolled back and convex, marked with slender streaks; the anthers are saffron-hued upon white filaments. The root, leaves, and flowers, are equally inodorous. This plant is occasionally cultivated in our own flower-gardens, and is easily increased by parting the roots in the autumn. With us the Sanguinaria flowers in the beginning of April.

J. M. Good, *Sec. M. S.*

leaf bears a close resemblance to that of coltsfoot.

The medical virtues of blood root are very considerable. It is capable of making a very strong impression on the human system. The dried root, pulverised and given in doses of four or five grains, generally pukes pretty violently, producing a great prostration of strength during its operation, which continues for some time. I have not observed it to operate as a cathartic. The taste is acrid and unpleasant. The pulverised root taken into the nose excites sneezing, and produces a sense of heat in that organ. It also acts as an escharotic on fungous flesh. I have cured several polypi of the soft kind by the continued use of it as a snuff. This vegetable has long been known and used by the people of this country as a domestic medicine. A few physicians have been acquainted with some of its virtues, and empirics have used it as a nostrum; but except a dissertation written upon it by some person at Philadelphia, and which I have not seen, I believe it has never been noticed by any writer on the materia medica.

Since the writings of John Brown have been generally read by medical men in this country, it has become fashionable to generalize every thing relating to medicine both in theory and practice; to refer all diseases to one or two general causes; and to consider medicines as differing from each other only in point of stimulant power or force of impression which they make on the human system, a circumstance which, I think, has retarded the progress of medical science among us. If I am not deceived, diseases depend more on the kind or quality of the actions excited by their causes, than on the quantity of action. Indeed, it is a doubt in my mind whether a mere excess or deficiency of action can with propriety be called a disease. The obvious consequences of this opinion will lead us to a different conclusion respecting the operation of remedies, viz. that certain substances may, by the peculiarity of impression which they make on the system, be better adapted to cure certain diseases than others, which apparently act with much greater force. I think we have abundant proof of this proposition, and on this

principle I have tried a variety of emetic drugs for diseases of the lungs, especially for consumptive complaints. I once thought that the good effects of emetics in that disease depended entirely on their nauseating properties; but from experience I have changed my opinion, and now conclude that some kinds of emetics, from the kind of impression which they make on the stomach, are much more successfully employed than others.

About two years since, I learnt from some source or other that blood root had been given with success in cases of hæmoptysis, and, having a case of that kind, immediately gave it a trial. The success was beyond my expectation. I soon thought of trying it in cases of cough, and from that time have been almost in the daily habit of prescribing it in such cases. From more than two years experience in the use of blood root in affections of the lungs attended with cough, I cannot assert what has been asserted of foxglove, that it will cure a confirmed consumption; but I can in confidence say, that, in my opinion, it is capable of doing more towards preventing that fatal

disease than any one remedy I have ever been acquainted with.

I have given blood root in powder, in tincture, and in simple infusion; which last is the better mode of giving it. In powder it operates more roughly, and spirit does not appear to extract its active principle sufficiently. When I give it for a cough, if the symptoms are urgent, I begin with a dose sufficient to excite puking; but generally endeavour to give it in as large doses as can be borne without that effect, and repeat it four or five times each day. Where there is great irritation and a constant disposition to cough, I join opium with it. Given in this manner, if the patient has not a confirmed hectic, it generally cures the cough.

I have also found blood root useful in cases of inflammatory rheumatism. In that disease I at first give it so as to puke, and then continue it in smaller doses: managed in this way, it is more certain to produce a diaphoresis than any other emetic. Blood root I understand has been recommended in cases of jaundice in the dissertation above alluded to; and a very

respectable physician informed me that he had known it cure epilepsy.

I have never known blood root produce any lasting bad effects. It never affects the head like the foxglove, and is on that account a much safer medicine.

In the hands of scientific men I am confident it will be found a very valuable addition to the materia medica.

Should you request it, I will hereafter send you some of the leaves, flowers, and seed of the blood root, which can easily be procured the ensuing summer.

NATHAN SMITH.

Art. XI.

CASE OF TIC DOLOREUX, OR PAINFUL AFFECTION OF THE FACE.

By ANTHONY FOTHERGILL, M.D. C.M.S., late Physician at Bath, now of Philadelphia.

Communicated in a Letter to J. C. Lettsom, M.D., President of the Medical Society, dated February 21, 1803.

Read Feb. 28, 1803.

MRS. D——, an elderly lady, aged about sixty-five, has for upwards of five years laboured under a most painful disease seated in the right cheek, and extending to the articulation of the lower jaw. It came on without any known cause, and she has never had a clear interval free from pain, except during sleep and once in August last for about two hours, and that without any cause to which she could attribute the ease. It has since that time gone on in its usual course, still rather increasing, in spite of every internal and external remedy that could be thought of, and at the expence of all her teeth, which have been successively extracted. Opening the mouth, cold air, or even touching the face with a fine cambric handkerchief, increases the pain, which is

otherwise aggravated by paroxysms, though she is never entirely free from pain. Sometimes there are thirty fits of excruciating anguish in a day, as if a fish bone stuck into the gum or cheek. Warm bathing and pumping, repeated nearly a hundred times, only increased the pain. She has sometimes rheumatic pains of the shoulders, striking to the stomach. Electricity was tried for thirteen days, but gave no relief, nor did blistering do any good. She then began to take opium, and now takes twelve grains a day, but it affords no sensible relief. Even the saliva in passing down causes pain. The sensation is as if scalding water was pouring along the inside of the mouth. Sometimes a prickling sensation is felt in the tongue.

For this complaint she has successively consulted Dr. Pendergast, Baron Dimsdale, Doctors Falconer, Lysons, Reynolds, Simmons, Melville, &c. Surgeons Sharp, Abernethy, Rush, Hamilton, *cum multis aliis*. Leeches, blisters, anodyne fomentations, lotions, embrocations, and issues;—*internally* ether, volatiles, valerian, asafœtida, guaiacum, wolfs

bane, cicuta for ten months; also bark, steel, extr. hyoscyamus nigr.; and, lastly, Perkinean tractors: but all to no purpose. Finding the faculty had thus exhausted their whole artillery on this intractable case, I was at a loss what to propose: therefore, as a dernier resource, I earnestly recommended the operation of dividing a principal branch of the nerve leading to the seat of the disease. To this, however, she positively refuses to submit.

Art. XII.

REMARKS ON THE LAND WINDS AND THEIR CAUSES.

By WILLIAM ROXBURGH, M. D.

THE land winds on the coast of Coromandel are those hot winds which blow at a particular season of the year, and hour of the day, from the western hills, commonly called the Ghauts, towards the Bay of Bengal. In the more inland countries, as above the Ghauts, they are not confined to any regularity, though they are felt sometimes with a great degree of severity and for hours together.

I understand also that in the upper parts of Bengal they are sometimes experienced very severely; but whether from the west, or the northward, or in what part of the year, I have not been able to ascertain. As far as this only tends to prove the insufficiency of the denomination, it would signify little, although in other respects it would be of more moment.

As they are generally supposed to be peculiar to this country, and are felt during several

months in the year, we should imagine their history and causes to have been perfectly investigated and understood; but I know not why, neither the one nor the other have as yet been satisfactorily explained.

The most plausible reason generally given for the great accumulation of heat in them is the heat of the season in which they prevail, and the long tract of country over which they have to pass. That this, however, is not the true cause, it shall be my endeavour to demonstrate; to which I will add an attempt to point out the most probable one, founded on known chemical principles.

Respecting the theory I have to offer, I regret that it has found but few patrons in this country, which, however, I flatter myself may be ascribed more to the manner in which it has been proposed, than to the foundation on which it is constructed.

In order to facilitate the explanation of my sentiments, as well as to shew that the land winds really deserve some attention from the philosopher, I shall briefly recount the phenomena accompanying their beginning and pro-

gress, as well as the effects by which they are generally followed.

Could my pen equal my sensations, I should be able to paint their effects in the most lively colours, aided by eight years experience in a country the most noted on the coast * for their intensity.

The land winds are preceded in the latter end of March or in the beginning of April by whirlwinds, which between eleven and twelve o'clock at noon hurry in various directions, mostly from west to east, towards the sea. These are called by the natives Peshashs or Devils, because they sometimes do a little mischief to the lighter buildings.

About the same time or a little after the appearance of the whirlwinds, we may observe all ranges of hills garnished as it were with clouds, which become daily darker and heavier, until they discharge themselves with much thunder and lightning in a heavy shower of rain. After this marked phenomenon the land winds set in immediately with all the violence of which they are capable.

* Samulcottah in the Northern Circars.

Their commencement is generally in the latter end of April, or beginning of May, and their reign lasts to the earlier days of June, during which period they generally exert their violence from ten or eleven o'clock in the morning until about three or four o'clock in the afternoon.

In this season the atmosphere is commonly hazy and thick, except that in the evenings and nights the sky is serene and clear, provided the land winds do not continue the whole day.

The rising sun which portends a land wind day appears of a fiery red, and as if involved in mist, which mist is changed afterwards into clouds that lie heavy on the Ghauts.

The land wind of each day is almost always preceded by a long calm, and immediately by a cloud of dust.

Their diurnal violence is terminated along the coast about two or three o'clock, by the setting in of the sea breeze, which wafts delight and health as far as its influence extends, which is not more than ten or twelve miles inland. An abatement of their intensity from

thence to the Ghauts is all that can be hoped for.

The sea-breeze regularly begins in the afternoon at one or two o'clock, blowing pretty steadily until sunset, when it dies away gradually, and at sunrise it is again perceptible, though weakly.

When I say its influence is only felt ten miles inland, I do not wish to be understood that it does not extend farther: I mean only its powerful refreshing properties, which it loses in proportion to the distance from the sea, and in an inverse ratio to its strength, which is not great. In general it arrives at thirty miles distance from the sea in the evening, and is then only agreeable by the ventilation it effectuates.

In the country above the Ghauts, as in Mysore, the east wind prevails also in the afternoon, but from a period much earlier, or cotemporaneous with the sea-breeze on the coast, which renders it clear that this inland breeze either does not extend farther than to the Ghauts, or really originates there; a point

which deserves to be ascertained, as another phenomenon depends upon this circumstance.

Should the sea-breeze fail, as sometimes happens, the land wind decreases gradually until it dies away in the beginning of the night, which, on account of its calmness, is dismal to a degree: next morning, a little motion of the air is again perceptible, but at the usual time the wind sets in as strong and hot as the day before. Every thing we put our hands upon is then distressing to the touch, which must be the case when the temperature of the body is inferior to that of the atmosphere. This we experienced for almost a fortnight in the year 1799 in the Northern Circars, when the thermometer at eight o'clock in the night stood at 108°, and at noon at 112°. Shades, globes, tumblers, then very often crack and break to pieces, and the wooden furniture warps and shrinks so much, that even the nails fall out of doors and tables, &c. In their greatest intensity, however, I have never seen the thermometer rise higher than 115°, viz. in the coolest part of the house, though some say they have observed it at 130°.

The Ghauts, and the hills at no great distance from them, are then seen lighted all night by spontaneous fires, and often in a very picturesque manner.

These illuminations appear, in general, about the middle of the mountains, and seldom or never extend to the top or bottom of them. They take place especially on those hills on which the bamboos grow very thick, which has probably led the natives to explain this phenomenon so rationally, by ascribing it to the friction of these bushes against each other.

Lieutenant Kater, of his majesty's 12th regiment, thinks that the corky bark of the adenanthera pavonina is often spontaneously inflamed, as he has frequently found, on his surveys, its bark converted into charcoal, and several of these trees burnt down to the roots, although they were not in the vicinity of any other trees.

In Europe I know these spontaneous ignitions have been much discredited; and I doubt not but should these few sheets ever be published, many objections will be raised against what I have related: but I have endeavoured

to state facts only, which a luxuriant imagination might have painted in more striking colours, but I am sure not with stricter adherence to truth.

The land winds are noted for the dryness which they generally produce on the face of the country, as well as on that of the animal creation. This sensation is particularly felt in the eyelids, which become in some measure quite stiff and painful. This is owing to the immediate volatilization of all humids that irrigate our organs, and which, in this particular one, probably gives rise to inflammations of the eyes, so frequent at this time of the year*.

The continuance of this wind causes pain in the bones, and a general lassitude, in all that live; and, in some, paralytic or hemiplectic affections. Its sudden approach has, besides,

* The eye flies, so often supposed to occasion it, produce a transient and sharp pain in the eye, but never, I believe, a lasting inflammation.

It is generally thought infectious, and may be so by the interference of the eye flies carrying the contagious matter from an affected eye to a sound one.

the dreadful effect of destroying men and animals instantaneously.

It is not very uncommon to see large kites or crows, as they fly, drop down dead; and smaller birds I have known to die, or take refuge in houses, in such numbers, that a very numerous family has used nothing else for their daily meals than these victims of the inclemency of the season and their inhospitality. In populous places it is also not very uncommon to hear, that four or five people * have died in the streets in the course of a day, in consequence of being taken unprepared. This happens especially at the first setting in of those winds.

The natives use no other means of securing themselves against this wind but shutting up their houses, and bathing in the morning and evening; Europeans cool it through

* Four people dropped down dead at Yanam, in the year 1797, an hour after my arrival there, from Masulipatam; and at Samulcotah four or five died the same day on the short road between that place and Peddapore: the number of inhabitants of either of these places does not exceed, I believe, five thousand.

wetted yats* made of straw or grass, sometimes of the roots of the wattie†, which wetted, exhale a pleasant but faint smell. It will be incredible to those that have never witnessed it, but the evaporation is really so great, that several people must be kept constantly throwing water upon the tats (eight feet by four) in order to have the desired effect of cooling a small room.

It would be scarcely necessary to observe, if it were not in contradiction to public opinion, that the cold produced is not a peculiar property of the wind, but depends upon the general principle that all liquids passing into an aëriform state absorb heat, and cause immediately around them a diminution of it, and consequently a relative coldness. On the same principle depends also the cooling of wine and water, in the land wind seasons, the latter in light earthen vessels which allow an oozing of

* The frame of them is made of bamboos in the form of the opening in the house to be tatted, let it be door or window, which is then covered with straw in the manner every one thinks best suited to retain the water longest.

† Andropogon muricatum.

the water through their pores, and the former in bottles wrapped in a piece of cloth or in straw, which must be constantly kept moistened.

The great violence of these winds is at last terminated by frequent showers of rain, in June, in the low countries, and by the greater quantity of the regular rains falling in the inland countries, which seem to suspend the partial formation of clouds along the Ghauts, and to leave them clearer, and visible at a greater distance than they had been at any other period of the year before.

After the enumeration of so many disagreeable circumstances, I am naturally led to an investigation of the causes that produce them. Before this can be done, however, I must prove, according to promise, that the theory of our philosophers is founded in error.

They ascribe, as already observed, the extraordinary heat which distinguishes these winds from most others, to the absorption of caloric in their passage over an extensive tract of country, at a time when the sun acts most powerfully in our latitudes.

According to this theory, the heat should

increase in proportion to the space over which this wind is to travel; it should be hotter on the coast than it is at any part of the country inland, or, which is the same, it should decrease by degrees from the eastern to the western sea of the peninsula. Experience, however, teaches us the reverse; for it is hottest near the Ghauts, and among the vallies between those ranges of hills, than at any place on the coast; and the heat of those winds decreases also as they approach the Bay of Bengal, and in a direct ratio from the Ghauts to the sea; accordingly, it is at Ambore* hotter than at Velloret, and at this place again than at Arcot‡, Conjeveram‖, and Madras, where

* A place situated in the most western valley of the Ghauts, immediately at the foot of the steepest ascent into the Mysore country.

† Lies in a spacious valley nearly at the entrance of the Ghaut mountains, and has the advantage of an open communication with the flat country to the north east.

‡ A large city, the capital of the nabobs of the Carnatic, east of the ranges of hills called the Ghauts.

‖ . . . miles east of the latter place in the road to Madras, a large populous place. I have chosen this tract or line as the most known, although not the hottest, for Ellore, Rajahmundry, and Samulcotah in the Northern Circars, are by far more exposed to these winds.

the land winds are seldom felt with any degree of severity.

Time is another measure applicable to the acquisition of heat, as it increases to the greatest pitch which a body is capable of receiving in proportion to its continuance; the land winds should therefore be cooler when they set in at ten or eleven o'clock, and hottest at their termination in the afternoon; they should be so at least at noon, when the sun is nearly vertical, and has the greatest influence on the substances from which heat is to be attracted. The contrary, however, comes nearest to the truth; for it is known that these winds set in with their greatest violence and heat at once; which rather abate than increase, as might be expected.

We should, on this principle, farther suppose the heat would increase gradually with the return of the sun to our latitudes, from its southern declination, and stand always in proportion to its position. We find, however, that experience also contradicts this point of the theory under discussion; for after the sun has passed our zenith*, the land winds set in

* The sun is in the zenith at Madras about the 26th of April.

at once with all their intensity, in the manner before described, and they cease as abruptly before its return again*.

A material change in the temperature of this climate is certainly effected by the approach of the sun from the south; but the heat which is thus caused, and which increases by imperceptible degrees, is never so great, and is only felt by those who expose themselves to it unprotected; for the air remains proportionally cool, and our houses afford, in this season, a pleasant retreat. We find it far otherwise in a land wind; for this penetrates our inmost recesses, and renders life miserable every where.

I have before observed, that winds equally hot with those of periodical duration are felt in all parts of the country, and at different seasons; a circumstance alone sufficient, if proved, to overthrow the groundwork of the old theory.

For a confirmation of this, I will appeal to the general observation, that immediately be-

* The sun is again in our zenith on its southern declination about the 19th of August.

fore a long rain the weather is sultry, and that a single shower is always preceded by a warm disagreeable wind.

We are very particularly reminded of the approaching great monsoon in October by the oppressive heat we have in the calm evenings of that month, which, I am persuaded, would equal that of the land winds in May, if the atmosphere was not cooled in the latter part of the night by breezes that have wafted over extensive inundated plains.

I can refer, secondly, to my Meteorological Journal, according to which, the 4th of June 1800, at Madavaram, a place not far from Bengalore, the thermometer rose for a short time to 104° just before a slight shower of rain, and at a time when heavy clouds darkened the western hemisphere.

Farther, in the months of March and April, 1804, we had often at Bengalore, in the afternoons, strong gusts of wind from the eastward, which, in common, were styled land winds, and were really as hot and disagreeable as moderate land winds are in the Carnatic. I could have multiplied instances of this kind, but

am of opinion that in a fact so much known it would be perfectly needless.

The last refuge of the defenders of this theory is the vallies of the Ghauts, in which they pretend the heat is generated by the concentrated and reflected rays of the sun.

I will not deny but the heat occasioned by these causes may contribute much to raise the heat of the land winds; but the sudden appearance of the latter, their usual strength, and abrupt disappearance, all militate against that explanation as a principal cause.

The heat of these winds should in this case, to say a few words more on the preceding subject, decrease regularly from the point where it is greatest towards the opposite, on both sides, as is the case on the coast of Coromandel. On the contrary, we find that, immediately on our having ascended the Ghauts, or on the top of hills* elevated above the clouds, we have escaped their heat all at once.

* Major Lambton, at the top of Carnatighur, one of the highest hills in the Carnatic, about three thousand two hundred feet above the level of the sea, found, in the middle of the land wind season, the thermometer at 79° and 80° in the

It is hereby remarkable, that the direction of the wind remains to appearance nearly the same every where. In Mysore, for example, the wind is, in the land wind season, west during the greater part of the day; in the afternoon it is from the east, and commonly warmer than the former.

This, together with what had been said before, will, I hope, be thought sufficient to establish my opinion relative to what *can not* be the cause of the heat in the land winds.

It remains now to point out a theory, supported on a firmer basis, which I shall endeavour to do in the following pages. It is founded on a chemical principle, and will explain, I think, the heat of these winds in a satisfactory manner.

The principle itself needs no demonstration,

mornings, and, at noon, 82° and 84°, when it was below at 103°, and more.

This observation may be the more depended upon, as the Major remained for a considerable time on the top of this hill, in the pursuance of his most accurate survey, in the course of which he pays great attention to this as well as to all other points that could influence his learned labours.

as it is admitted as a general law; viz. that "all bodies, when they become more dense, "suffer heat to escape; or, what is the same, "they give out heat." For example, when gases or aëriform substances become vapours, they discharge as much heat as was necessary to keep them in their former gaseous state: farther, vapours in condensing into fluids are known to do the same, as also fluids, acquiring solidity.

I am sorry that the quantity of heat set free in the condensation of vapours required for a pound of water has escaped my memory; but I recollect it was very considerable. We know, however, that a great deal of it is required for the evaporation of the same measure, and it is but reasonable to admit that the same quantity with which it has combined should be discharged on its returning to its former state of fluidity.

In order to apply this principle to explain the presence of heat in our land winds, I must first observe, that the atmosphere in January, February, and March, is perfectly clear and se-

rene; and then I will call to mind what has been said of the phenomena of those winds, that they are preceded by clouds on and among the Ghauts, and that a heavy shower of rain from that quarter announces their arrival; that during their continuance clouds are observed to lie on the Ghauts, and that the atmosphere, even in the low country, is hazy and thick. I must add also, that the countries west of the Ghauts are at this season frequently visited by heavy showers of rain, accompanied with much thunder and lightning, and sometimes with hail. Here in the Mysore country I have found the heaviest showers of this kind to come from the north west*, which is exactly in the direction of the countries remarkable for the great heat of the land winds in this season. At times, we have also showers from the east and south east, and my attention shall not be wanting to ascertain whether it is not at the

* The hottest land winds in this season (1804) at Madras were, I understand, from the north west, which corresponds with the direction from which the rains came in Mysore at that period.

time when the land winds blow hottest in the Carnatic. By this we see, that the clouds formed on the Ghauts, charged with water and electricity (by causes I am not now to investigate), are drawn to the westward; whilst the heat which, during the formation of these clouds, must necessarily be discharged, is carried to the east or to the lower parts of the coast, and causes the properties for which the land winds are so remarkable.

I have acknowledged already, that the heat occasioned by the power of the sun in this season, contributes to the aggregate of it in the wind; but I must observe also, that it acts only as a secondary cause, and passively, by preventing its absorption and diminution in the career over a variety of substances, particularly moisture, with which it would combine, if they had not been previously removed or incapacitated.

In colder climates, this absorption takes place in a greater degree, as substances are abundant with which the heat produced by the formation of rain, can combine and be-

come imperceptible*. It is, however, there also often remarked, that the heat of the sun in a cloudy day is more powerful than at any other time. In common this is ascribed to the reflexion of the rays of the sun from the clouds; but I opine it is oftener the consequence of the formation of water in the clouds, which obscure the sky at that moment.

It has been observed, that the heat of the land winds is not felt on the top of high hills, or on plains of a very inconsiderable perpendicular height above those in which it rages most violently; as for example, in Mysore near the Ghauts, which is only about five hundred feet higher than the vallies immediately below. This might be considered a weighty objection against my theory; as heat, considered in the light of an elastic fluid, expands equally on all sides; and from whatever cause

* Earl Dundonald's Treatise, p. 20. "The frequent changes in the degree of heat and cold in the atmosphere are to be ascribed more to the alternate disengagement and fixation of heat by chemical combination, than to the effects of the solar rays."

it proceeds, it should be supposed to extend even farther where it meets with less resistance, as from the air in higher regions, which is known to be lighter and more penetrable than nearer the earth.

But the reverse takes place; for almost immediately above the clouds no other heat is perceptible than what might be owing to the nature of the climate.

This circumstance may be accounted for by the diminished density of the air in the lower parts of the country, produced by the heat of the season, which would naturally cause the wind to rush thither, with all its contents, and with greater impetuosity. The coolness of the atmosphere on elevated situations may be ascribed also to the evaporation of the uppermost strata of the clouds, which accompany the land winds.

Many arguments I have dispensed with, which might have been produced to elucidate and to establish my theory, as they were chiefly such as could be collected from simple inference, and from affirmative application of doctrines advanced before.

I will only add, that both the sirocco and samiel may be owing to similar causes as those which appear to be productive of the pernicious, or rather disagreeable, effects of our land winds.

Art. XIII.

CASES ILLUSTRATING THE EFFECTS OF OIL OF TURPENTINE IN EXPELLING THE TAPE-WORM.

CASE I.

By JOHN COAKLEY LETTSOM, M. D. and President of the Medical Society.

Read May 21, 1810.

Early in September 1809, I was consulted by J. P. Esq., about thirty-five years of age, on account of an uneasiness in the abdomen, with dyspepsia, which were supposed to originate from tænia, or tape-worm, as small portions of it had occasionally been evacuated by the rectum.

I prescribed a course of the male fern, with occasional cathartics, as recommended by Madame Nouflet. In this plan he persevered for the space of three months, in which period he discharged, at two different times, about eight yards of the tænia. In April 1810, he again applied to me, in consequence of labouring under his former complaints; adding that, he imagined, from the long use of the plant I had

recommended, his pains, and particularly the dyspepsia and general debility, had increased.

At this time I ordered the oleum terebinthinæ rectificatum, in a dose of nine drachms by weight, and after it a little honey to remove the heat and unpleasant taste it might occasion. In a week after taking the oil, he called upon me agreeable to my request, and gave me the following information; that, as far as he could judge, in swallowing this medicine, it occasioned less heat than would have resulted from taking the same quantity of brandy, or other spirit; and that the taste and heat it produced were soon removed by the honey.

In about three hours after taking this dose, a laxative motion was produced, without any discharge of tænia: but soon afterwards, with the second stool, more than four yards of the worm were discharged, and also a quantity of matter, resembling, as the patient expressed it, the substance and skins of the tænia. On the surface of this evacuation he noticed the oil floating, together with the tænia and the substance mentioned. It produced little or no

pain, and certainly much less than the purgative he had taken after the use of the male fern. The subsequent motions contained no tænia, nor any of the substance before noticed. He experienced no pain or heat in the urinary passages, though the urine continued to impart a terebinthinate smell for three or four successive days.

My patient has since remained in perfect health, enjoying a degree of comfort to which he had been a stranger for the preceding half year.

From this and other instances, I am induced to conclude, that the best method of taking the oil is without any admixture; and that the dose of nine drachms occasions very little inconvenience; and further, that this quantity, perhaps owing to its quick purgative effect, excites no irritation in the urinary passages, although it imparts its peculiar smell to the urine.

I do not recollect that it has been heretofore observed, that the oil has been evacuated in its original state. It might hence be inferred, that it is most efficacious when exhibited un-

combined, in which state it is not attended with any particular inconvenience.

It is well known that tænia may exist in a healthy state of the system; and that hence its presence cannot be accurately ascertained by any other circumstance than the actual discharge of portions of the worm itself. Sometimes, indeed, there is felt a heavy pain in the epigastrium, attended with dyspepsia and emaciation; but these are not pathognomonic symptoms, as they may arise from other causes.

CASE II.

By THOMAS HANCOCK, M.D. F.M.S., Physician to the Finsbury Dispensary.

Read May 7, 1810.

I HAVE used the ol. terebinth. in only one case of tænia. Jane Woodward, a poor woman, about forty-five years of age, first applied to me at the London Electrical Dispensary, some months ago. She had been for more than seven years afflicted in a very distressing manner with this complaint, and was

four times a patient in different hospitals; where, by the use of active remedies, she obtained temporary relief from pain, and frequently voided large portions of the tænia per anum. So soon as she had recovered a little strength, by indulging her appetite, after the violent operation of purgatives in these hospitals, her abdomen began to increase considerably in size, and small detached portions of tænia, about an inch or more in length, apparently endowed with life, continued to pass at times through the rectum; so that she was prevented from earning her bread, by this very distressing circumstance. She had generally recourse to purgatives on these occasions, and their operation had regularly the effect of reducing the size of the abdomen; but her disease continued. I may also observe, that, after these courses of medicine, she had less of rumbling in the intestines, and felt less pain, than when she freely indulged her appetite; for then, to use her own expression, "the worms appeared to gain strength," according to the increase of her own strength.

About two weeks after the application of

electrical sparks to the abdomen, she discharged a portion of tænia, seven yards in length, without any appearance of head, which lived in cold water nearly three hours after its expulsion. Mr. Chamberlaine informs me he has known the tænia live nearly as long in water which was much above the temperature of the human body; a sufficient proof of the extraordinary tenacity of life in this animal.

Electricity was continued for some weeks longer; but as her pains also continued, and no more of the worm came away, my friend Mr. Chamberlaine kindly offered to try the effect of his electuary of the dolichos pruriens. The patient took this at first without, but afterwards with the scobs stanni in large quantities, and for a considerable time: but though, as she asserted, these medicines, more than any she had ever taken, relieved her sufferings, they produced no discharge of tænia.

I now heard of the ol. tereb. having been administered in this complaint, and resolved to give it a fair trial, especially as my patient was herself very anxious to use any remedy that promised the slightest probability of success.

I may premise, that her abdomen was enlarged as formerly, her stools slimy, and, in short, all her symptoms indicated that she had still large portions of tænia in her intestines. I ordered her at first small doses of this oil, viz. two drams twice a day, mixed with treacle to disguise its taste. This produced no other effect than an increase of pain and uneasiness, and particularly on going to stool, as if it irritated the rectum. The dose was now increased to half an ounce, at longer intervals. The first dose in this quantity, which she took without treacle, produced a little sickness and confusion of ideas, and afterwards operated as a purge. She complained of no uneasiness whatever in the urinary organs. After these doses, she passed such a quantity of slimy mucus, with such relief in all her painful symptoms, that she earnestly entreated I would allow her to take a double dose. The quantity of an ounce, which she now took, always produced a great degree of giddiness, as if she was intoxicated, which came on shortly after taking it, and continued for an hour or

more, until the violent cathartic effect which followed, removed it.

Although this medicine was repeated, after this manner, every two or three days for a fortnight or more, by her own particular desire, there was no appearance of tænia in her stools. I could not, however, but observe, that the mucus which was discharged so abundantly by the operation of the ol. tereb. sometimes exhibited the appearance of white films, as if the substance of the worm had been broken down. She took the very large dose of an ounce and half two or three times, after the medicine began to lose its effect, with results similar to those I have described. In short, by her own account, violent purging was the only thing that relieved her; and all kinds of strengthening remedies, as well as nourishing diet, uniformly increased her sufferings, so that she abstained from food when her appetite craved it, in order to avoid the anticipated pain.

I have since heard that she went in the London Hospital, and had again taken the ol. tereb.; for I strongly advised her to discontinue its use some time before she left the Fins-

bury Dispensary, having lost all hopes of its ultimately curing her.

CASE III.

By SAMUEL FOTHERGILL, M.D. F.M.S., Physician to the Western Dispensary.

Read May 21, 1810.

A SOLDIER, aged about forty, applied to the Western Dispensary, the 28th of October 1809. He stated that he had been subject to tape-worm during the last four years, previously to which he had served with the army in Egypt, and attributed the origin of his complaint to the badness of the water which he drank in that country. He is now a private in the Middlesex militia. He complains of gnawing pains in the abdomen, irregular appetite, debility, and anxiety. He is somewhat emaciated, and his complexion is rather sallow. Whilst with his regiment, he had occasionally taken, by order of the surgeon, a variety of worm-medicines, and small pieces of tape-worm were passed at times; they even

sometimes came away alive, without medicine having been taken, and without a stool.

I directed him to take pulv. scammon. cum calomel. ℈j. every third morning. Two doses operated freely, but only a few very short pieces of tape-worm were brought away. I now directed him to take half an ounce of the oil of turpentine. He took it as ordered, November 9, in a little tea, sweetened with honey. In a quarter of an hour he was seized with retching, and in the course of the day passed four copious stools, in one of which was a tape-worm of several yards in length. The portion which the patient brought me I found measured four yards: he threw the smaller pieces away; but thought that altogether the length might be ten yards. The worm was dead, and had a livid appearance: the patient remarked that the pieces which formerly passed from him were of a whiter colour and brighter aspect.

The dose of the medicine was increased to six drams, and was repeated twice a week for the space of a month. During the first fortnight small pieces of worm continued to pass away, both after taking the medicine and at

other times; but in the second fortnight the stools were natural, and contained no vestige of tænia. The remedy was consequently discontinued; and the man called some weeks afterwards to acquaint me that he had remained entirely free from all symptoms of his complaint, and had regained his strength and cheerfulness.

He was generally a little sick after taking the medicine, and for a day or two was affected with a severe pain in the back part of his head, but complained of no other unpleasant effects from its use.

CASES IV. and V.

By GEO. BIRKBECK, M.D. F.M.S. Physician to the General Dispensary.

Communicated February 19, 1810.

Dr. Birkbeck stated to the Society that he had administered the oil of turpentine successfully, to two middle aged females, who had long been troubled with the tape-worm.

In the first case half an ounce was given: no unpleasant sensation occurred whilst it was swallowed, but considerable confusion of ideas and vertigo, with a slight degree of nausea,

were soon produced. In a short time a discharge from the bowels took place; this was quickly followed by another, with which more than four yards of the worm were evacuated. The patient, in consequence of the frequent spontaneous escape of small portions of tænia, and the expulsion of a larger quantity about twelve months before by an active purgative medicine, had an opportunity of comparing the ordinary appearance of the worm with that which it now presented. Instead of being whitish, smooth, full, and in motion, she represented it to be dark-coloured, shrivelled, filmy, and lifeless. A second dose of the oil did not expel any more of the worm, nor, when he last saw her, about three months afterwards, had it again appeared. In that interval she had not been disturbed by any of the unpleasant feelings to which she was before subjected.

Considerable derangement of the general health and great pain in the pit of the stomach were produced by the tape-worm, in the second case in which the oil of turpentine was employed. Although one tea-spoonful only was introduced, sickness and acute pain fol-

lowed: this dose was repeated several successive mornings, always with the same immediate effects; but occasionally it was succeeded by the expulsion of large portions of the worm. The worm was represented to have the appearance before noticed. The patient had sufficient resolution and confidence to continue for some time the use of the medicine, and at length became free, not only from any further appearance of tænia in the stools, but likewise from all those sensations which had so long denoted its presence in the intestines.

CASE VI.

By JAMES SANER, Surgeon, F.M.S.

Read Aug. 10, 1810.

A WOMAN, about forty years of age, came to me in May last, very much agitated, having just voided about six or eight feet of tape-worm. She told me, that pieces had come away for the last seven years whenever she took a dose of jalap, which she had done that morning. She never found any thing to relieve her

so much as the jalap, though she had taken a great deal of medicine from respectable practitioners, and had also been under the care of a noted empiric for two years.

I thought this a good opportunity for trying the ol. tereb. rectificat. I therefore gave her one ounce with an equal quantity of syrup of saffron. In less than two hours she returned to me with about eight feet of the worm, with the head attached. She was very much gratified by this, as she had been told to look for the small black head. The medicine did not produce any very unpleasant sensation; merely a slight degree of nausea, a giddiness as if intoxicated, and a frequent desire to void urine, though without pain.

The day after, she complained of a feeling of emptiness in the stomach. I gave her the decoct. cinchonæ for a few days, which completely removed the sensation, and she has remained perfectly well ever since.

P. S. The woman informed me she used to eat raw meat formerly, as it seemed to ease her stomach more than any thing else; but

since she voided the worm, she has had no craving for it.

CASE VII.

By the same.

SINCE communicating the above, I am sorry to say I have had a case of tænia, where the ol. tereb. rect. has not so completely answered my expectation.

Being very sanguine in my opinion of it, in consequence of my former success, I mentioned the case to a relation of mine, who informed me he knew a labouring mechanic (a Russian) who had voided large pieces of tape-worm for a number of years. He persuaded this man to visit me, and I gave him the same dose I had given my former patient. It brought away a very large quantity, but so very soft that I could not measure it. As I could not perceive any thing like the head of the worm, I advised him to repeat the dose in a few days, which he very readily complied with, as he had suffered very little from the first.

I gave him the same quantity as before (viz. ol. tereb. rect. et syr. croci āā ℥j). This produced violent retchings, tenesmus, strangury, and great pain in the back; the urine was also a little tinged with blood. The strangury and tenesmus continued nearly a week, and the patient was not able to work for several days after. As he had not voided any portion of worm with the last dose, I concluded that he was quite well, but requested he would call on me again in about two months. He called last week, and I advised him to try his old remedy (a drachm of jalap), which had its usual effect, in bringing away a large quantity of the worm. I fear I shall not be able to induce him again to try the ol. tereb., from the severe symptoms which it produced when he last used it.

Aug. 27, 1810.

Art. XIV.

SOME ACCOUNT OF THE LIFE AND WRITINGS OF NATHANIEL HULME, M.D. F.M.S. LATE PHYSICIAN TO THE CHARTERHOUSE.

By H. CLUTTERBUCK, M.D. F.M.S. &c.

Read March 13, 1809.

THE subject of the following narrative was one of the earliest members of this Society, and evinced on all occasions an anxious desire to promote its prosperity. He is entitled likewise to rank, in future, among the benefactors of the Society, by a liberal donation bequeathed to it at his death. While, therefore, his loss must be a matter of regret amongst us, I cannot doubt that some memorial of his character and writings will meet with a favourable reception.

Dr. Hulme was a native of Halifax in Yorkshire, and was bred to the profession of a surgeon-apothecary in the country. He was afterwards a surgeon in the royal navy, and while in this capacity on the Leith station, after the peace of 1763, he embraced the favourable opportunity which presented itself, of

prosecuting his medical studies at the University of Edinburgh, where he took his degree of doctor of physic in the year 1765. The title of his thesis was *Dissertatio Medica Inauguralis de Scorbuto;* a subject which was at that time very commonly chosen by naval practitioners for their inaugural essays. Shortly after taking his degree, Dr. Hulme came to settle in London as a physician, and at first devoted his attention to the practice of midwifery; but this he soon relinquished. In the year 1770, the *General Dispensary* (the first institution of the kind in London) was set on foot, and Dr. Hulme was its first physician. He was nearly about the same time appointed physician in ordinary to the *City of London Lying-in Hospital.* Both these situations he resigned many years before his death, and withdrew himself at the same time in a great measure from the active exercise of his profession. He did not cease, however, in his retirement, to cultivate science, and was particularly attached to the study of natural and experimental philosophy. Of this, he furnished ample proof in his numerous and ingenious ex-

periments on the light spontaneously given out by certain bodies, an account of which was published in the Philosophical Transactions of the Royal Society.

About the year 1774 or 1775, he was, through the influence of Lord Sandwich, then first lord of the admiralty, elected physician to the Charterhouse, a situation which he retained till the time of his death*.

Dr. Hulme's death was occasioned by a fall from a ladder, which he had imprudently ascended, for the purpose of superintending some repairs that were going on at the top of his house. He was much bruised by the fall; and the brain appeared to have suffered by concussion; for his ideas were observed to be slightly incoherent for several days after the

* The two physicians who in turn immediately preceded Dr. Hulme at the Charterhouse, enjoyed their situations for a very short time: they were both cut off by fever; and Dr. H. himself, shortly after taking up his abode in the house, was seized with the same malady, and in a manner so severe as had nearly brought on him the fate of his predecessors. The disease in these repeated and successive instances was ascribed to contagion; yet great care had been taken to eradicate this by ventilation and whitewashing, previous to Dr. H.'s entrance.

accident, which he survived only about a fortnight. He died April 25, 1807, at the age of seventy-five.

Dr. Hulme's retired and œconomical habits enabled him to accumulate considerable property, in the distribution of which by will he paid the most impartial attention to the claims of consanguinity. It is but justice to add, that, in the opinion of those who knew him most intimately, his parsimony was by no means the result of a sordid disposition to accumulate wealth, but sprung rather from a want of taste for the expensive enjoyments of life. To the *General Dispensary* he left a legacy of fifty pounds; and a similar sum to the *Medical Society of London*, of which, if not a founder, he was at least one of the earliest associates, and the prosperity of which he was always zealous to promote.

Dr. Hulme was the author of several publications, which are still held in considerable esteem. Of these, the following, I believe, is a pretty accurate list.

In the year 1768, he republished his thesis, with additions; to which was annexed a 'Pro-

posal for preventing the Scurvy at Sea.' The chief purport of this was, to recommend the use of orange and lemon juice, which had been found highly serviceable, as well in the prevention as the cure of that disease.

In 1772, he published a Treatise on the Puerperal Fever, a disease which about that time had proved extremely fatal in the metropolis, particularly in the different hospitals, and which his situation in the Lying-in Hospital had furnished him with ample opportunities of investigating. He ascertained, from repeated dissections, that the immediate cause of the disease was inflammation of the intestines and omentum. The occasional causes (after delivery) assigned are, too free an use of heating things, —an over-heated air,—breathing the impure atmosphere of an hospital,—mental anxiety,—a bad habit of body,—obstructed perspiration,—but especially, a neglect of keeping the bowels sufficiently open. Dr. Hulme did not believe in the spreading of the disease by contagion; a fact, however, which seems to be sufficiently established by other testimony. The principal remedy insisted upon for the cure is re-

peated purging, a practice which is known to have been attended with great success, and which serves to confirm the author's opinion of the proximate cause. This work contains a valuable summary of almost all that is to be found in authors on the subject of puerperal fever, from the time of Hippocrates downwards.

In the year 1777, he published the Latin oration which he had delivered before the Medical Society, according to annual custom, the title of which is *De Re Medica cognoscenda et promovenda.* In this are pointed out, with considerable force and elegance, the means best calculated for the advancement of medical science. A small tract was subjoined, entitled, *Via tuta et jucunda Calculum solvendi in Vesica Urinaria inhærentem.*

In the following year, 1778, an enlarged edition, in English, of the above tract was published, under the title of 'A safe and easy 'Remedy for the Relief of the Stone and Gra-'vel, the Scurvy, Gout, &c.; and for the 'Destruction of Worms in the Human Body; 'illustrated by Cases: together with an ex-

'temporaneous Method of impregnating Water and other Liquids with fixed Air, by simple Mixture only, without the Assistance of any Apparatus or complicated Machine.' The remedy here so much extolled, and in such a variety of cases, was merely *fixed air*, or carbonic acid gas, which is proposed to be disengaged in the stomach, by causing the patient to take, four times a day, fifteen grains of salt of tartar (the sub-carbonate of potash of modern chemistry) dissolved in any liquid, drinking immediately after it as much of the vitriolic acid, properly diluted, as might suffice for the saturation of the alkali. A striking instance is related of the efficacy of this remedy, in a supposed case of calculus of the urinary bladder, where, after a few days use of it, a discharge took place of a number of stony fragments, with entire and permanent relief of the symptoms. The utility of the same remedy, in the other disorders mentioned, is likewise proved by the evidence of clear and well described cases adduced.

In 1800, Dr. Hulme instituted a great number of curious and interesting experiments

on the *light spontaneously emitted from various bodies*, an account of which was published in the *Philosophical Transactions* of that and the following year. By the term *spontaneous light* is meant, that species of illumination which is occasionally observed to be emitted by various bodies, both animate and inanimate, under certain circumstances: as instances of the former may be mentioned the shell-fish called *pholas*, the *medusa phosphorea*, and various other of the *mollusca*. And, when deprived of life, marine fishes in general seem to abound in this kind of light. In the class of insects, many emit light very copiously, as several species of fulgora, or lantern-fly, and the glow-worm; also the *scolopendra electrica*, and a species of crab, called *cancer fulgens*. Rotten wood is likewise known to emit light very copiously. The object of Dr. Hulme, in his experiments, was to determine the laws of action of *spontaneous light*, as proceeding from different bodies; and to investigate its relations to other agents. A short account of the results which he obtained will not, perhaps, be deemed uninteresting.

The first series of experiments shew very

clearly that the quantity of light emitted by putrescent animal substances is not in proportion to the degree of putrefaction, as commonly supposed; the light beginning to shew itself before any of the ordinary signs of putrefaction appear. Indeed, as soon as a great degree of putrescency has taken place, the luminous property is destroyed.

It appears, from the next experiments, that the light thus given out is a constituent principle of the body, and may be separated from it: for when about four drachms of the flesh of a fresh herring were put into a phial with a solution of Epsom salt, after two days a lucid ring was observed floating upon the top of the liquid, and, on shaking the phial, the whole at once became beautifully luminous, and continued in that state.

The next series of experiments relate to the power which certain substances possess of extinguishing *spontaneous light.* A great variety of substances were found to have this effect; as water, both alone, and when holding various matters in solution; acids and alkalies; ardent spirits; even the neutral salts

when the water was fully saturated with them, although in a dilute solution they appeared to promote its escape, and to retain it. Thus, says Dr. H., we may take *light* and diffuse it through water, so as to render the whole most brilliantly luminous; or, in other words, to impregnate water with light.

From the succeeding experiments it appears, that though spontaneous light is extinguished by some bodies, it is not lost, but may be again revived in its former splendor. Thus, if it be extinguished by saturating the liquid with a neutral salt, it may be again made to appear by dilution. An extreme degree of cold likewise extinguishes it in fishes, in the glow-worm, and in rotten wood. It returns, however, with the return of the former temperature. Extreme heat was also found to extinguish it; while, by a moderate degree of heat, it was rendered more vivid.

Dr. Hulme next investigated the effects of different gases on spontaneous light. Oxygen gas was not observed to render it much, if at all, more vivid than atmospheric air. Azotic

gas was found to prevent its appearance, and, in general, to extinguish it. Hydrogen gas produced nearly similar effects, as did also carbonic acid gas. Sulphuretted hydrogen and nitrous gas were more powerful than the others in extinguishing it, and in preventing its appearance. Lastly, when the luminous body was placed in an exhausted receiver, the light quickly disappeared, but revived again on the admission of atmospheric air.

It appeared from other experiments, that solar light, when imbibed by what is called *Canton's Phosphorus*, is subject to the same laws, with respect to heat and cold, as the spontaneous light of fishes, rotten wood, and glow-worms.

In addition to the works above mentioned, Dr. Hulme was one of the editors of the "*London Practice of Physic*," a work that, with a certain class of readers, was at one time in considerable request. He also left behind him in manuscript, but in an unfinished state, an

account of an improved truss for hernia, a complaint under which he himself had laboured for many years, and which of course had attracted no small share of his attention. He had found by experience, that all the instruments in common use were defective in some material points; and he studied much to render them more perfect. His invention, in the opinion of persons well qualified to judge, will be found an important acquisition to surgery. The paper he had drawn up on the subject was intended by him to be presented to the Medical Society; and he shewed great anxiety, during his last illness, that it should be completed: with this view, he explained with much minuteness the particular construction and uses of his invention. The description of the structure and manner of applying this instrument being subjoined, it is unnecessary to be more particular.

The following paper, in the author's handwriting, was transmitted to the Medical So-

ciety by his executors, at his particular request, for the purpose of publication.

" Charterhouse Square, 31 July, 1802.

" *Nathaniel Hulme, to the Medical Society of London, sends greeting.*

" I have left to the Society a chirurgical machine which I wish to be made known to the world as soon as may be, and in such a manner as may best redound to the honour both of the inventor and of the Society.

" PALM-TRUSS.

" I consider this machine to be of great importance to the public. It is a truss of my own invention, not yet made public, for the cure or relief of an inguinal hernia. I have named it a palm-truss, from its acting continually like the pressure of a hand, and it has been tried and found successful. The button is designed to fasten to a button-hole in the breeches waistband, as the breeches button does, and is of prime use; it keeps the machine always steady in every posture of the body, and prevents its slipping up or down,

and supersedes (either wholly or generally) the necessity of a thigh-strap. For this reason, if the herniac (that is, the person labouring under an hernia) should happen to be a female, she must wear drawers, with a strong and broad waistband; for the pressure of the waistband upon the machine should be always considered as the firmest and best pressure, and therefore there should be always three buttons to the waistband, in order to make it broader and stronger. The pressure of the instrument upon the hernia may be regulated by the springs, and there should be never fewer than three of them when of the spiral kind. The longitudinal springs are not so firm and steady, in their pressure, as the spiral, and are also apt to break, and therefore I prefer the spiral. If the machine be properly regulated, in all its parts, it sits as easy as a glove, and is no more trouble to the patient than that of putting off or on a sword-belt or girdle. Like all other new things, it requires at first some attention on the part of the patient, but a little practice will soon overcome all obstacles. In cases of inguinal hernia, though on one side only, it is best to wear two of these machines, by way of prevention,

because an hernia on one side is frequently succeeded by a second on the other side; besides, two strengthen the groins exceedingly, and remove all fear from violent exercise, or labour, or riding on horseback, &c.

"*P. S.* The lighter the machine is made the better, and therefore let its plates be only so thick as to resist necessary pressure; and remove all superfluous iron-work. Let the pad or bolster be made with soft flannel doubled, and covered with a leather facing."

REMARKS ON THE ABOVE: BY WILLIAM NORRIS, ESQ., SURGEON TO THE CHARTERHOUSE, &c.

THERE are not many diseases that deserve the close attention of surgeons more than hernia. It is always productive of much inconvenience; often of great danger to the person afflicted by it; and it is of very frequent occurrence. The great variety of bandages and trusses that have been recommended by surgeons and ingenious mechanics sufficiently proves the difficulty of devising and constructing an instrument which shall possess the two essential requisites of preventing the descent of any part of the contents of the abdomen, and

of being worn with ease by the patient. Most of those now in use, that answer any good purpose, are cumbrous and heavy; their springs are sometimes too weak to give security; and they are often so strong as to occasion much pain.

The application of the truss, every morning, devolves generally upon the patient himself; and when it is considered that upon the correct adaptation of the pad to the proper spot, and preserving it there, its only use depends, its frequent failure ought not to excite surprise. There are other inconveniences attending the trusses now in common use, viz. the occasional breaking of the springs, the wearing out of the covering, and ultimately of the whole instrument. To the first of these, the negligent, although wealthy, sometimes fall victims by suffering the parts to remain unguarded until another truss be procured; but the poor and industrious labouring man has all the evils to encounter, with this superadded, that he is unable to purchase one. To obviate in some degree these dangers and inconveniences, the instrument herewith described appears to be well contrived. It will easily be seen that little anatomical knowledge is necessary for properly adjusting it to the part—that it is

not expensive in its construction—that it is much less liable to be displaced by the various motions of the body than the common truss—and that the degree of pressure may be just what the patient chooses. It is peculiarly adapted to old herniæ, where the opening from the abdomen is large, and which generally consist of a great portion of omentum and sometimes of intestine; and this is the kind of hernia which it is most difficult to keep up. Dr. Hulme having been himself the subject of hernia, had tried several trusses of the common kind without relief; and being thus driven to exercise his ingenuity, he happily contrived the present simple machine, which perfectly answered his purpose.

An intimate acquaintance with him, of more than twenty-five years standing, occasioned in me the highest respect for his amiable, virtuous, and benevolent character; one striking trait of which is, that on his death bed he frequently and anxiously desired that this invention, by which the sufferings of his fellow creatures he hoped might be alleviated, should be made public.

Old Jewry, W. N.
27 November, 1809.

APPENDIX.

DESCRIPTION OF A FEMALE URINAL, OR BED-BOAT,

For the Use of Patients that cannot bear a Change of Posture;

WITH AN ENGRAVING.

Communicated by a Corresponding Member of the Society.

Read April 30, 1804.

AMONG medical duties, one, and not the least important, is to alleviate human sufferings. When a fatal event cannot be prevented, its approach may yet be rendered less painful: the being able to render even such assistance affords some consolation to the sympathising anxieties of a physician or surgeon.

In some miserable cases, women cannot bear to be moved at all, on account either of a painful disorder or extreme debility. In these circumstances, the urine cannot be caught by any common utensil, but is permitted to wet the bed, and to excoriate the skin, so as to occasion or aggravate ulcers usual in these unhappy cases, and greatly to increase the complicated wretchedness of such a situation. To

every humane practitioner it must give satisfaction, if he can alleviate some part of such distress. For this purpose the Female Urinal, represented in the annexed drawing, was invented. On being placed in a proper situation, it caught the urine, without any change of posture or trouble whatever, and completely answered what it was intended to accomplish. Other means may have been employed to remedy the very disagreeable grievance here mentioned, but they have not come to the writer's knowledge. It may not be improper to communicate to the members of the Medical Society this method of giving some relief to an afflicted patient, though it may be doubted whether so simple and so humble a contrivance can merit a place in their Memoirs.

Explanation of the Figure.

	Inches.
Whole length	$8\frac{1}{4}$
Widest part	$3\frac{1}{4}$
Narrowest part one inch from the end . .	$2\frac{1}{4}$
The aperture in length . .	$4\frac{1}{2}$
——— in width . .	2

It contains ten ounces. The point of the vessel is bent a little downwards: the length of it might be increased so as to contain a pint or more*.

FURTHER OBSERVATIONS ON THE USE OF OIL OF TURPENTINE AS AN ANTHELMINTIC REMEDY.

THE President, Dr. Lettsom, informed the Society of his having employed the ol. terebinth. in two cases of ascarides, with decidedly good effect. The patients were children, and the remedy was administered by injection, in the quantity of two drachms, blended with a decoction of oatmeal. A considerable discharge of the worms followed, and no further inconvenience was experienced.

* It may be proper to add, that the bed-boat, formed of earthen ware, is sold at No. 5, Portugal Street, London.

DESCRIPTION of the PLATE.

FIG. I. represents the diseased scull, described at page 174.

FIG. II. The Female Urinal, or Bed-Boat. See Appendix, p. 245.

FIG. III. Dr. Hulme's Palm-Truss.

This Figure represents a truss for the left side.

A B C, an external oblong thin plate of iron, covered with leather: from A to B (being the upper edge when the instrument is in its proper situation) is about two inches, and from B to C about three inches.

E F G, a bolster formed of several folds of flannel, with a ring of soft leather, to be placed immediately over the ring, is fastened to an iron plate X Y, which is connected with the outer iron plate by leather straps, and by three spiral springs in the middle.

K L, a leather strap, about an inch and three quarters wide, to go round the body, and fasten to the buckle Q.

S T, the waistband of the breeches, with a button hole R level with its lowest button.

P, a button fixed at the lower part of the plate, to go into the button hole R.

W M, a strap to go round the left thigh, and, passing through V, to be fastened by the buckle N.

Any person may see the machine by application to the Society's House, Bolt Court, Fleet Street.

END OF VOL. I. PART I.

James Compton, Printer, Middle Street, Cloth Fair, London.

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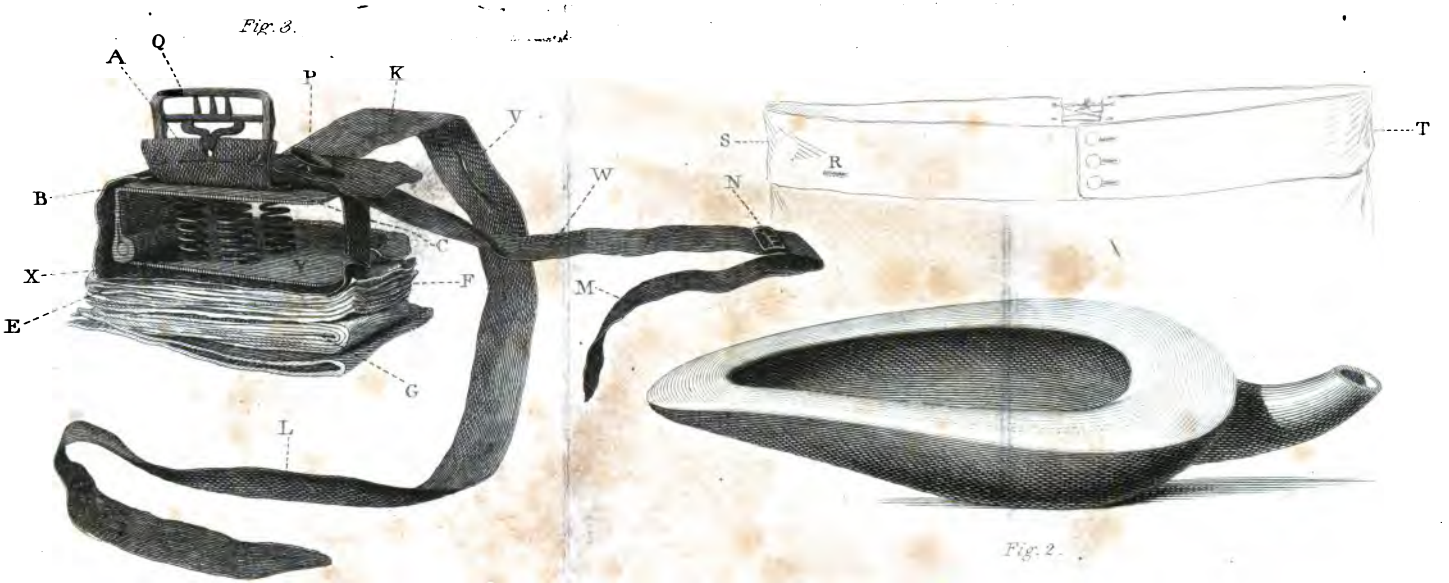
Fig. 1.



Trans. Med. Soc. Vol. 1 p. 1.

Drawn & Engraved by George Cooke.

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